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ABSTRACT

A study examined the attitudes of nurses in three hospitals toward non-native-English-speaking physicians. The subjects, 156 medical-surgical nurses, listened to three anonymous audiotaped physicians from different ethnic backgrounds: American, Japanese, and Persian. The physicians were recorded in two contexts: in a formal context, reading a short patient history and giving a verbal order directed toward a nurse; and giving an impromptu response to a question regarding their future plans. Nurses rated each physician for each context, using a semantic differential scale. Results indicate a significant positive relationship between physician pronunciation and nurse perceptions of his medical competence, with the native-English-speaking physician receiving the highest rating. The physician with the strongest accent, the native Japanese-speaker, received the lowest ratings. There was also a significant positive relationship between context of speech and ratings; all physicians received a higher rating on speech in the informal context. It is concluded that if a physician's pronunciation or speech style causes nurses to evaluate him negatively, there is need for pronunciation and accent reduction instruction both in the English-as-a-Second-Language classroom and in continuing language instruction for non-native-speaking hospital personnel in teaching hospitals, and for cross-cultural training for nurses. Contains over 100 references and the survey instrument. (MSE)

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THE EFFECT OF A PHYSICIAN'S PRONUNCIATION ON NURSES' PERCEPTIONS OF THE PHYSICIAN'S MEDICAL COMPETENCY

by

LAURA ANNE HORANI

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ABSTRACT

An abstract of the thesis of Laura Anne Horani for the Master of Arts in Teaching English to Speakers of Other Languages presented May 4, 1995.

Title: The Effect of a Physician's Pronunciation on Nurses' Perceptions of the Physician's Medical Competency

Although many researchers have studied language attitudes in the last three decades, none of the studies have been conducted in the hospital setting, where there are more serious consequences for those working with patients being labeled linguistically "incompetent," as charges of incompetence in language are apt to lead to charges of incompetence in other areas of mastery as well (e.g., Ryan, 1983). This study examines the attitudes of a sample of nurses from three Portland-area hospitals towards nonnative English speaking physicians. The subjects, 156 medical-surgical nurses, listened to three anonymous audiotaped physicians who were from three different ethnic backgrounds: American, Japanese and Persian. The physicians were first all recorded reading a short patient history and giving a verbal order directed toward a nurse. This was the formal context. For the informal context, the physicians gave an impromptu response to a question regarding their future plans. The nurses rated each physician twice, once for each context, using the Speech Evaluation Instrument (SEI), a semantic differential scale using bipolar

adjectives developed by Zahn and Hopper (1985). Results indicated that there was a significant positive relationship between a physician's pronunciation and a nurse's perceptions of his medical competency, as measured by the SEI, with the native English speaking physician receiving a higher rating than the two nonnative English speaking physicians. The native Japanese speaking physician, who had the strongest accent, received the lowest ratings on the SEI. There was also a significant positive relationship between the context the physician was speaking in and the ratings he received on the SEI, with the informal context receiving a higher rating for all three physicians than the formal context. If a physician's pronunciation or speech style causes nurses, not to mention patients, to evaluate him/her negatively, then one implication of this study is for the need for more pronunciation work and accent reduction exercises not only in the English as a second/foreign language classroom, but also as a continued offering for nonnative English speaking hospital personnel in teaching hospitals. Another implication relates to the need for better preparing nurses to work and communicate successfully with nonnative English speaking physicians, other hospital personnel, and patients by offering transcultural nursing classes in nursing school and making it a mandatory part of every nurse's education.

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Any mistakes made in writing up and further analyzing the data in Chapter Four are strictly my own.

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CHAPTER I

INTRODUCTION

Research in language attitudes is not only a fascinating field, but it is also one that has real world consequences, as "personnel judgments, and many other societal evaluations, are grounded on the individual's ability to talk well and to make a good presentation of him/herself" (Gumperz & Cook-Gumperz, 1982, p. 4). People's attitudes regarding language and which language varieties are somehow better than others can prevent someone who speaks a nonstandard form of the language or with an accent from succeeding in school or getting a job. Even the kind of job the person finally is hired for can be affected by his/her language variety or accent and helps determine whether the person is put in a managerial or janitorial position. Research also indicates that a person's accent or speech style may affect whether a person gets a promotion or keeps his/her job (Callan & Gallois, 1987; de la Zerda & Hopper, 1979; Eltis, 1980; Kalin, Rayko & Love, 1980; Singer & Elder, 1989).

If the person who speaks accented English is a physician, then the stakes are even higher. If patients decide they cannot communicate with this physician (for one reason or another), they may take their business elsewhere, resulting in a financial loss for the physician and/or the hospital at which s/he is employed. Or perhaps, a nurse takes a telephone order for a medication from a physician with a heavy accent and misunderstands the dosage or even the type of medication. This could have possible serious consequences for the patient.

STATEMENT OF THE PROBLEM

The purpose of this study is to determine what effect a physician's accented English speech produces among a sample of medical-surgical nurses who speak English as their native language. More specifically, does a physician's pronunciation affect the way a nurse perceives his medical competency?

BACKGROUND AND NEED FOR STUDY

The researcher has been interested in the hospital setting for nearly a decade, from the time she first began to work as a health unit coordinator (unit secretary) on a busy adult surgical floor that contains patients from orthopaedic, plastic surgery and trauma services. When first beginning her graduate studies, the researcher became interested in English for Medical Purposes (hereafter abbreviated EMP) after reading an article by van Naerssen (1978), which pointed out the need for EMP courses for nonnative English speaking hospital physicians, as it is not unusual to have a situation where neither the patient nor the physician understands each other well. For example, a nonstandard English speaking patient goes to a hospital to receive care and an international medical graduate (hereafter abbreviated as IMGs) who either speaks a non-American dialect of English (such as Pakistani) or possesses very little conversational English ability is put in charge of obtaining the patients's health history. Finally, a strong background in intercultural communication together with many years' experience observing physicians and nurses interact, gave the researcher the idea for this study.

The need for this study can be seen in the many articles available on IMGs - previously known as foreign medical graduates (FMGs), a less politically correct term because it has "foreign" in it - who come to the United States to do their residency after finishing medical school overseas (Gayed, 1991; Part & Markert, 1993; Sutnick, Friedman & Wilson, 1993). Each year, an increasing number of IMGs are admitted to residency programs in the United States. Eggly and Schubiner (1991) claim that 15% of all residency programs are filled by IMGs. Although these physicians are often highly-qualified, as admission to residency programs in the United States is very competitive (especially for university hospitals), they are often not prepared "linguistically and culturally for the psychosocial aspect of caring for patients"(p. 5).

In addition, hospital systems in the United States are often quite different from those in other cultures. In the United States, the staff behave more equally toward each other and the physician is most likely not seen as omnipotent (Boggs, 1989; Bradley & Edinberg, 1990), although this may not be as true for private hospitals. Nurses' roles in the United States are constantly changing, as more of the functions that were once under the strict domain of physicians are now being performed by nurses (Bradley & Edinberg, 1990). There is still obviously a difference in what a physician does and what a nurse does (unless one is referring to a nurse practitioner) but physicians, especially younger ones, seem to respect and appreciate the nurse's skills more. The physician/nurse relationship has evolved into a more collaborative, egalitarian one (Arnold & Boggs, 1989). This may be difficult for the IMG to adjust to as physician/nurse relationships in other cultures are often hierarchical, and what the physician recommends is what the nurse unquestionably does (Eggly & Headbloom, 1995).

How do nurses perceive IMGs? This researcher found nothing written about this aspect, and the kind of impressions other physicians and hospital personnel have of IMGs is mentioned only in passing by Eggly and Schubiner (1991) who say that IMGs "may perceive differences in treatment within the residency program, and may not be considered as equal to their American colleagues" (pp. 5-6). This researcher believes that the majority of nurses are not being adequately prepared in nursing school to deal with people from other cultures (especially physicians from other cultures). This belief is in part supported by Barbee (1993), who believes that because many basic nursing school programs do not deal with race (and this researcher would add cultural differences in general), they "simply do not prepare nurses to deal effectively or safely with large numbers of people" (p. 358). It has been this researcher's experience that nurses tend to perceive nonnative English speaking physicians less favorably and blame them for any breakdown in communication.

The patients also behave quite differently in the United States, as they expect to be able to communicate with their health care providers and to be involved, if not "in charge," of any decisions made regarding their treatment. However, Hinckley, Craig, and Anderson (1990) have shown that the desire patients have to make or assist in medical decisions varies with age, with elderly patients having less interest in such involvement. Patients in other cultures traditionally have not been allowed as much input into making patients. For example, "informed consent," where a patient has the option to give his/her permission for a procedure (no matter how minor) after being told of its risks and benefits is something that is not done routinely in many other parts of the world (Eggly & Headbloom, 1995). If the physician believes that his/her patient is being impertinent or disrespectful, it could affect the quality of health care that the patient receives. Although the patient's attitude could affect the care s/he receives from either a native English speaking physician or a nonnative English speaking physician, this researcher believes that there is a greater chance for misinterpreting a patient's attitude when the physician is from another culture.

How much individual physicians and hospitals will be affected by the relatively new Oregon Health Care plan remains to be seen. This health care plan, which covers all previously uninsured Oregonians, involves managed care, a theory that states more profits are generated by keeping people healthy than waiting until they are too ill to treat them. According to Woodward (1994), although it is but a vague theory in most parts of the United States, managed care is a reality in Portland. Now that every patient has health insurance, they have the freedom to choose in which hospital they would like to receive care, rather than choosing public hospitals, which usually have a mission to treat the indigent. In Portland's already competitive market, physicians and hospitals will need to work much harder to keep the patients they have and attract new ones. Public hospitals can no longer count on having a large population of patients as even patients of low socio-economic status, who make up a large part of the traditional public hospital patient population, can go to a private hospital.

This also comes at a time when many hospitals in the area have looked at the traditional more expensive ways they provide health care and, in response to managed care, have attempted to become more cost-effective and efficient while trying to continue to provide patient care and still remain competitive. One way of doing this is by using fewer registered nurses (RNs) and more licensed practical nurses (LPNs) and certified nurses' aides (CNAs) to create a new skills mix to provide patient care (Woodward, 1995). The decrease in the number of RNs on a floor has meant that teamwork and good interpersonal communication skills have become increasingly important for all hospital staff (Bradley & Edinberg, 1990; Cunningham & Wilcox, 1985; Fritz, Russell, Wilcox, & Shirk, 1984, Wallace, 1993).

From the 1960s on, there have been numerous studies on language attitudes, yet none have been conducted in the hospital setting where there are greater, more serious consequences for physicians (and other hospital personnel) who work with patients being labeled "unintelligible" or linguistically "incompetent," as charges of incompetence in language are apt to lead to charges of incompetence in other areas of mastery as well (Edwards, 1982; Galloway, 1980; Ryan, 1983). This study attempts to begin to fill in this gap by studying a sample of medical-surgical nurses' perceptions as they listen to three anonymous audiotaped physicians (one native English speaker and two nonnative English speakers), to see whether their reactions to accented speech are any different than their reactions to unaccented speech.

STATEMENT OF RESEARCH HYPOTHESES

Pronunciation and Medical Competency

H1 There is a significant positive relationship between a physician's pronunciation and a nurse's perception of his medical competency, as measured by the three dimensions (superiority, attractiveness, and dynamism) of the Speech Evaluation Instrument.

Native/Nonnativeness and Ratings on the Speech Evaluation Instrument (SEI)

H1 There is a significant positive relationship between a native English speaking physician's speech and the ratings he receives on the SEI.

H2 There is a significant negative relationship between a nonnative English speaking physician's speech and the ratings he receives on the SEI.

Formal/Informal Contexts

H1 There is a significant positive relationship between the context (a tense, formal one versus a relaxed, informal one) the physician is speaking in and the ratings he receives on the SEI.

Year of Graduation From Nursing School

H1 A There is a significant positive relationship between the number of years (less than 10 years) it has been since a nurse graduated from nursing school and the way she perceives a nonnative English speaking physician's speech.

H1 B There is a significant positive relationship between the number of years (more than 10 years) it has been since a nurse graduated from nursing school and the way she perceives a nonnative English speaking physician's speech.

H2 A There is a significant negative relationship between the number of years (less than 10 years) it has been since a nurse graduated from nursing school and the way she perceives a native English speaking physician.

H2 B There is a significant positive relationship between the number of years (more than 10 years) it has been since a nurse graduated from nursing school and the way she perceives a native English speaking physician.

Overseas Experience

H1 There is a significant positive relationship between a nurse who has travelled or worked overseas and the way she perceives a nonnative English speaking physician.

H2 There is a significant negative relationship between a nurse who has travelled or worked overseas and the way she perceives a native English speaking physician.

DEFINITION OF TERMS

Converge - to accommodate one's speech by using certain linguistic strategies such as slowing down, speaking more loudly, and using simple vocabulary (as in Foreigner Talk) to create similarity between oneself and another person one perceives to be different, in order to help the conversation run smoothly (Giles, 1977; Giles & Powesland, 1975).

Diverge - to shift or move away from another person's speech form by using certain linguistic strategies, such as broadening one's accent, to differentiate between one's own ethnic group and the other person's or to create more of a psychological space between oneself and the other person (Bourhis, 1979; Giles & Powesland, 1975).

EMP - English for Medical Purposes. A form of English as a Second Language that focuses on teaching aspects of medical English based on the needs (e.g., writing a progress note, obtaining information from patients or dictating charts) and the types of students (e.g., physicians, nurses or pharmacists) one is teaching (van Naerssen, 1978).

Floor - the hospital nursing ward where non-critical patients stay, as opposed to the intensive care units (ICUs), where critically ill patients are cared for.

IMG - International Medical Graduate. A physician who completed medical school overseas and has come to the United States to do his/her residency. Not all IMGs are nonnative speakers; some are American citizens, but the majority do not speak English as their first language.

Intelligibility - how well one's message can be understood by others. Many things can interfere with intelligibility: accent, intonation, location of pauses in the utterance, rate of speech, use of correct vocabulary and grammatical structures, and the grammatical complexity of the utterance (Fayer & Krasinski, 1987; Smith & Nelson, 1985; Street, 1990).

Language Attitudes - the feelings one has toward the ingroups and outgroups in society that are brought out because of the language or language variety used by that group (Giles & Ryan, 1982; Ryan, Giles, & Sebastian, 1982; Ryan & Sebastian, 1980).

Matched Guise Technique - an indirect way of getting people to react to different spoken accents (or guises) that can either be regional accents or accents from another country. In a true matched guise experiment, as developed by Lambert, Hodgson, Gardner & Fillenbaum (1960), one single person produces all of the guises being evaluated. More recently, researchers have also used a modified matched guise , where the speakers speak using their own natural accent (Gallois & Callan, 1981; Ryan & Carranza, 1975; Strongman & Woosley, 1967).

Medical team - the group of physicians (from the attending on down to the medical student) in charge of a patient's care. Examples of teams include: the family practice team, orthopaedic team, and the trauma team.

Rounds - what the physicians do twice a day when they walk around the nursing floor as a team, checking on each of their patients, briefly discussing his/her case and deciding on a plan of action for the day (during morning rounds) or reviewing the patient's day (during evening rounds). Rounds are completed by the physicians writing orders on their patients.

Surgical resident - a physician who is doing a residency in the surgical specialty. For surgeons, residency usually lasts six years (the year a physician is called an intern is his/her first year of residency). The more years of residency a physician has completed, the higher his/her status.

TESOL - Teaching English to Speakers of Other Languages

CHAPTER II

REVIEW OF THE LITERATURE

The review of the literature yielded many articles related to ethnic identity, ethnolinguistic identity and stereotypes and how these factors affect one's language attitudes. Language attitude studies in themselves are quite numerous, although the majority of them use students as their subjects, rather than any other segment of the population, such as nurses. In the field of speech communication itself, there are few articles dealing with the physician/nurse relationship (e.g., Cunningham & Wilcox, 1985), other than those that deal with what a nurse does when a physician gives her an order that she believes will negatively affect the patient (these articles are usually written about female nurses and male physicians). Other articles are outdated (e.g., Stein, 1967), talking about the physician/nurse relationship where the physician is omnipotent and the nurse is his handmaiden. This relationship has changed to become one that is much more egalitarian and professional, where both the physician and the nurse have a contribution to make toward providing quality patient care. Other than speech communication journals, short articles about communication (involving nurse/patient or nurse/physician) can also be found in nursing journals (e.g., Wallace, 1993).

This chapter will first focus on the topics that are part of the foundation of language attitude studies: stereotypes and ethnocentrism; ethnicity, ethnolinguistic vitality and identity; speech accommodation theory, and speaker competence and perceived intelligibility. Next, the focus will turn to a description of past language attitude studies and the problems that have generally been associated with such studies. Finally, before looking at hospital communication, a discussion of both instructor's and employer's attitudes towards accented English will be presented. Instructors and employers are two types of roles that place people in positions of power. These people are examples of "gatekeepers" in society: if, for some reason, they have a negative attitude about a person, they can prevent him/her from advancing in life. Language use is something that can be used against a person by someone who is unfamiliar with him/her: a "listener's judgments of a speaker's personality and status frequently depend upon the speaker's accent" (Ryan & Bulik, 1982, p. 51).

STEREOTYPES AND ETHNOCENTRISM

Early studies that many social psychologists refer to (Ball, 1983; Gallois, Callan & Parslow, 1982) deal with two types of attitudes, namely the stereotypes a subject has towards various ethnic groups and his/her level of ethnocentrism. A classic article by Katz and Braly (1933) asked 100 Princeton University students to select traits from a prepared list of 84 adjectives to describe 10 different racial groups. The subjects then selected five adjectives that seemed most typical for each race. This study indicated that stereotypes can be elicited by merely mentioning the name of a racial or ethnic group: "almost any characteristic can become attached to any race and stick there with scarcely any factual basis" (p. 288). The students tended to show more agreement on the adjectives that they believed applied to more familiar groups such as African-Americans or those of Jewish persuasion and the least amount of agreement for relatively unfamiliar groups (remember this article was written in 1933), such as those who are Chinese, Japanese or Turkish. The reason these students tended to agree more on adjectives for familiar groups is that they had had some contact, some experience, with these groups. Stereotypes may not be accurate, but Rothbart, Dawes and Park (1984) believe that contact is necessary to develop accurate stereotypes. However, Amir (1969) believes that without any contact between groups, there is no chance at all to develop any kind of stereotypes,positive or negative, accurate or inaccurate. Stereotypes are not always negative; according to Schenck-Hamblin (1976) they are generally thought of as a collection of trait names characterizing some social object. Negative or positive, stereotypes can influence a listener's view of how intelligible a speaker is, no matter how familiar the listener may be with that variety of English.

Whereas stereotypes are directed toward specific racial or ethnic groups, ethnocentrism is "a tendency to view people unconsciously by using [one's] own group and [one's] own customs as the standard for all judgments" (Samovar & Porter, 1982, p. 273). In the 1950s and 1960s, as immigration increased worldwide, researchers developed scales to measure the levels of people's ethnocentrism, not only as a way to study the conditions for social conflict, but also to look at individual differences in acculturation. The California E scale was developed in 1950 (Adorno, Frenkel-Brunswik, Levinson & Sanford) for use in the United States, the British Ethnocentrism scale was developed in 1967 (Warr, Faust & Harrison) for use in the United Kingdom, and an Australian

Ethnocentrism scale was developed in 1969 (Bestwick & Hills). The Australian scale was tested on 273 subjects who rated 32 items (made up of 16 negative statements and 16 positive statements) on a 4-point Likert scale. The authors' results seem to indicate that this scale has internal consistency and correlates with external criterion variables that are known to relate to ethnocentrism in other countries (such as socio-economic status and education). Thus, they assert that this scale could be used in the future with a larger, more representative population to determine levels of ethnocentrism and what types of subjects are more likely to be ethnocentric. To be valid, such a scale must be up-to-date and relevant to the culture in which it is used (Warr et al., 1967). The concept of ethnocentrism is important to language attitude studies in that it is something that is unconscious for most people (or not admitted to by others), that surfaces indirectly through one's attitudes.

ETHNICITY, ETHNOLINGUISTIC VITALITY AND IDENTITY

Three elements, discussed below, help people to define who they are and how they will react to those who are culturally different. These concepts are ethnicity, ethnolinguistic vitality and ethnolinguistic identity. Ethnicity can be difficult to define. Gudykunst and Ting-Toomey (1990) look at ethnicity as part of a subjective process that involves self-categorization and/or other-categorization. Self-categorization is the definition one gives to oneself. It is also being able to see similarities and differences between oneself and one's group (the ingroup) and also between one's ingroup and other groups (the outgroups). A person's ethnic identity is activated and maintained through language and communication (Gumperz & Cook-Gumperz, 1982). Language is so important to ethnicity that Giles and Johnson (1981) state "even when there are other strong and clear criteria for ethnic group membership (such as skin colour), an ethnic language variety often remains a criterial attribute" (p. 203).

According to Giles, Bourhis and Taylor (1977), a group can be said to have ethnolinguistic vitality if it possesses the following variables: status (economic, social, sociohistorical and language), demography (the number of group members and their distribution throughout an area, the larger the group, the more ethnolinguistic vitality it has) and institutional support (whether the language group receives formal and informal representation in, for example, the mass media or educational system). An illustration of how this affects language attitudes comes from a study which was done in Scotland by Abrams and Hoggs (1987). Two kinds of Scottish accents, one from Dundee in mid-east Scotland and the other from Glasgow in mid-west Scotland were compared to Received Pronunciation (PR) English. When the middle-class Dundee accent was compared to the middle-class Glasgow accent, the subjects (Dundee middle-class high school students) rated it more highly on both solidarity and status measures. However, when they listened to the tapes comparing the Glasgow accent to the RP accent, they rated the Glasgow accent more highly on both solidarity and status measures. The authors believe these results provide support for a social identity analysis of variation in language attitudes: "when real status and power differences are less salient, or attenuated, accent loyalties may shift in the direction of whichever accent is most easily adopted as a criterion for ingroup membership" (p. 210). People's language attitudes can shift so that they view accent X more favorably if they believe it is more similar to the accent used by their ingroup (XY) when it is compared to an accent that is decidedly very different (Z).

Homophily, the degree to which individuals who come into contact and interact with each other are similar, plays an important part in one's initial attraction to strangers (Gudykunst, 1985). The two people interacting do not have to really be similar, it is more the perceived similarity that counts and this homophily not only increases the likelihood of communication, it also helps make communication more effective. McCroskey, Richmond and Daly (1975) developed a measure of perceived homphily that contains four dimensions of response: attitude, morality, appearance and background. The more homophilous the subjects saw the three or four "target persons" in each study as being, the higher they would rate them on these four dimensions. People who the subjects saw as being leaders were also rated as being more homophilous than the other "target people" in these studies. Leaders who are homophilous with their followers have the ideal condition for producing attitude change, as they have a high degree of similarity between themselves and their followers and their followers most likely believe them to be competent (Rogers & Bhowmik, 1970).

Ethnolinguistic identity refers to the criteria for group membership. These criteria are often connected to using linguistic distinctiveness strategies when speaking to a member of another group. It is also related to language attitudes. Ryan and Giles (1982) explained that the language attitudes of group members depend on the situation in which the language is used. If the situation is one where solidarity-stressing or group-centered dimensions are dominant, negative attitudes increase and individuals will speak in a linguistically distinctive manner. This is also known as divergence, which will be discussed further beginning on page 20. However, if the situation is one where status-stressing or person-centered dimensions are pervasive, identification with one's ethnic group decreases and interpersonal factors (such as one's attitudinal similarity to the other person) begin to take effect, causing individuals to speak more like the members of the outgroup. This is known as convergence, which will be discussed further in the next section below. A nonnative English speaker who is attempting to switch speech styles to match the situation may not always be successful in that the style s/he assumes may be mistaken for a native speaker of a lower class variety and then be evaluated negatively (Ryan, 1983). If a nonnative English speaking physician speaks with a strong accent, and is unable to change his/her speech style to match the situation (obtaining a patient history versus getting to know the nurses and other hospital personnel s/he works with) patients and hospital personnel may evaluate him/her more negatively.

SPEECH ACCOMMODATION THEORY AND LANGUAGE ATTITUDES

When speakers accommodate or shift their speech styles toward each other, this is convergence. Linguistic features that speakers can change include speech rate, pause and utterance length and pronunciation. They can also switch to the other person's language, if capable. The usual reason people consciously or unconsciously (Dillon, 1980) converge to a particular speech style has to do with their desire to be liked, to be seen as part of the group and to encourage further interaction. Street (1990) believes that speech matching makes it easier for speakers to coordinate their communicative exchanges and achieve understanding. "Foreigner talk," where the native speaker slows down the rate of his/her speech, increases his/her volume, and substitutes easier vocabulary words for more difficult ones (Richards, Platt & Weber, 1985) is an example of this.

Whenever a speaker and a listener are mutually unfamiliar with each other (Bradac, 1990), the listener will formulate beliefs and evaluations of the speaker while listening to him/her, which in turn, affects the way the listener subsequently behaves toward the speaker. The more similar a person's speech is to one's own, the more likely one is to perceive the other person as being homophilous which leads one to evaluate his/her language favorably, especially on those traits that involve friendliness or solidarity (see, for example, Ball, 1983; Giles, 1970).

Speech Accommodation Theory, developed by Giles in the early 1970s, attempts to explain both the motivations behind some of the shifts in speech styles, such as accent, during conversations with members of a perceived outgroup and the consequences resulting from these shifts. Speakers who converge toward the speech style of the person they are speaking with are more successful in getting their message across (Giles & Powesland, 1975). There are limitations to just how much a speaker should converge; for example, if s/he goes too far and changes too many linguistic features at once, these violate the listener's ideas about appropriate speech and language forms (or valued norms) for that speaker's group (Bradac, 1990). Basically, the speaker can be perceived as patronizing, ingratiating or caricaturing (Thakerar, Giles & Cheshire, 1982). An American instructor interviewing for a position teaching English as a foreign language (EFL) in Australia would not want to speak with an Australian accent during the interview, as it may quite likely be interpreted negatively. Speech Accommodation theory also implies that less fluent nonnative speakers will be perceived less favorably by native speakersthan more fluent speakers (White & Li, 1991) as nonnative speakers are usually unable to interact and communicate fully with native speakers when they first arrive to their host country.

Divergence, another aspect of this theory, occurs when a speaker chooses to shift his/her speech style away from the other person's, in order to accentuate the differences between the two speech styles. Although this has traditionally been viewed as negative, researchers now see it as a way for an ethnic group to maintain its identity and cultural distinctiveness (Giles, Bourhis & Taylor, 1977; Giles & Smith, 1979; Thakerar, Giles & Cheshire, 1982). The speaker may feel proud of the language variety his/her group uses or the speaker may want to create some psychological distance between him/herself and the listener (Thakerar, Giles & Cheshire, 1982). Often, divergence occurs with second language learners because they lack the skills to accommodate, so they use the same speech style with everyone. Unfortunately, if the listener does not realize that this lack of convergence is due to the speaker's limited skills, the nonnative speaker can be perceived as impolite, insulting or even hostile.

Divergence can also be seen in cooperative relationships, where what A does is necessary to what B does, but the two are basically different and both A and B acknowledge and accept this difference. Examples of this type of relationship include: teacher-student, physician-patient, nurse-student nurse, and physician-nurse. Speech Accommodation theory predicts that mutual convergence will occur when high and low

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status individuals want to cooperate, get each other's approval and communicate efficiently. When a physician and a nurse are discussing a patient, the physician will speak differently to the nurse than s/he will to other physicians. Likewise, the nurse will speak differently to the physician than s/he will to other nurses. When communicating with each other, the physician and the nurse will both tend to converge towards what they perceive is the other's speech style (although, in reality, they will be diverging, not converging).

Giles and Cheshire (1982) tested this prediction and added a prediction of their own: lower status speakers will converge more in the direction of the higher status speaker because the lower status speaker has a greater need for the other's approval. One of their experiments used nurses of varying status. Nurse dyads were recorded discussing authentic nursing situations (in which one nurse was higher in status than the other). Listeners (who were undergraduate students) perceived that the speakers had diverged from each other: "the HS [high status] speakers slowed down their speech rates and became more nonstandard in their accents whilst the LS [low status] speakers increased their speech rates and became more standard in their accents" (p. 246). Although the nurses believed they were converging toward each other (psychological convergence), independent listeners perceived their speech styles to be diverging away from each other. As long as both partners believe they are converging towards each other's speech style, the lack of linguistic convergence does not seem to cause any problem and seems to be part of the cooperative relationship.

SPEAKER COMPETENCE AND PERCEIVED INTELLIGIBILITY

Another factor influencing language attitudes is the speaker's competence. Communicative competence in the second language classroom has been emphasized for nearly two decades. However, many instructors seem to ignore some of the aspects that make up communicative competence, choosing instead to focus more on what is said (using enough vocabulary to get the message across) rather than on how it is said. They often neglect the very errors that are most likely to irritate native speakers, such as incorrect grammar (Ensz, 1982; Galloway, 1980; Piazza, 1980; Politzer, 1978) and pronunciation (Fayer & Krasinski, 1987; Knops, 1989). Fayer and Krasinski (1987) state that two components, distraction and annoyance, make up what is termed "irritation." Distraction takes the listener's attention away from the message and annoyance is a negative reaction to the distraction form. The researchers used native English speakers and native Spanish speakers to listen to tapes made by Puerto Rican learners of English at various levels of English proficiency and found that irritation correlates negatively with intelligibility. When the listeners were timed, they made their judgments of intelligibility rather quickly, within the first 5 to 10 seconds (p. 317). The native Puerto Rican speakers often judged the Puerto Rican learners of English more harshly, whereas the native English speakers were more tolerant. Fayer and Krasinski state this result may be due to the feelings of embarrassment among some nonnative speakers of a language: "nonnatives, no matter what their proficiency level, are embarrassed by their compatriots' struggles in the nonnative language" (p. 321).

Although Fayer and Krasinski (1987) believe that intelligibility is hearer-based (which is more difficult, if not impossible, for second language instructors to remedy in the classroom), Smith and Nelson (1985) believe that intelligibility is interactional between speaker and listener, that both are responsible for making sure the message is understood. This can be addressed in the second language classroom by identifying nonstandard styles for students, discussing when it is appropriate to use slang and idioms, and teaching students how to paraphrase when they find themselves floundering in a conversation with a native speaker. Nonnative English speaking physicians who are able to understand the nonstandard styles of English that their patients speak and to use paraphrasing whenever others do not understand them, may be perceived as more intelligible.

Intelligibility is also affected by paralanguage and prosody, two examples being hesitations and speech rate, that are often not focused on in the communicative classroom. These types of nonverbal speech contribute to the coherence, understanding and the coordination of a communicative event (Street, 1990). If there are too many hesitations or the speech rate is too slow, a listener may lose interest in the conversation and move to end it or, even worse, avoid future interactions with this speaker, who perhaps was only striving for accuracy. The lower the frequency of hesitations, the more likely a speaker will be perceived favorably (Street & Hopper, 1982). As for speech rate, Brown (1980) found that increases in rate result in higher ratings of competence, but lower ratings in benevolence However, at least in Western cultures, moderate and relatively fast rates of speech are viewed more favorably in that speakers are generally seen as being more intelligent, having a higher status, and being more competent (Brown, 1980; Street, 1990).

If a nonnative speaker is seen as unintelligible, whether s/he actually is or whether it is due to the listener being influenced by negative stereotypes of that speaker's ethnic or racial group, the negative affect mechanism is aroused, causing the speaker to be associated with feelings of discomfort and frustration in the listener's mind. The negative affect mechanism is more likely to operate in those interpersonal communication situations where the people involved are at least minimally motivated to understand each other (such as a conversation between a waiter and a customer in a restaurant). Sebastian, Ryan, Keogh and Schmidt (1980) found when varying levels of white noise were added to tapes of a Spanish-accented male and a standard English male speaker, listeners responded more negatively to the accented tapes, especially when they were punctuated by bursts of white noise, rating them lower on such items as effective, ease of understanding, status, perceived belief/attitude similarity and comfortable (Table 2, p. 207).

Speakers who have been labeled "communicatively competent" by their second language instructors are expected to act "competently" and may do so in the classroom. However, if these speakers are not informed of the importance of being linguistically competent and intelligible, then once they are outside the classroom, they will face a greater chance of being judged as incompetent in all other areas as well (Ryan, 1983). But is the entire problem of intelligibility the speaker's problem or does the listener also "own" part of the problem? In a study on female nonnative English speaking teaching assistants (NNSTAs), Rubin and Smith (1990) found that when undergraduate students believed the lectures recorded on audiotape were being given by NNSTAs, they rated the lecturer lower on her teaching abilities. Based on background questionnaires, 88% of the students had encountered a NNSTA at least once, 42% dropped or withdrew once they found out their class was taught by a NNSTA and 57% felt that their grade had been negatively the affected as a result of an NNSTA's poor communication skills (pp. 345-346). However, the more often these students had had classes taught by NNSTAs, the more satisfied they felt as they became more skilled at listening to accented speech. Instead of merely focusing on NNSTAs by recommending more pronunciation drills, the authors recommend a listening class for undergraduate students, where they could spend time listening to varying degrees of accented English. They also recommend large-scale cultural sensitivity training so that undergraduate students discontinue equating accented speech with a lack of teaching skills. These steps would result in less anxiety towards and more acceptance of accented speech.

Many nurses have not had adequate preparation in intercultural communication and exposure to people from other cultures until they are actually on the floor, either during their last year or two of nursing school (depending on the hospital where the student nurse does his/her clinicals) or as a graduate nurse. The nurses in the current investigation, especially the ones who had been in the field for a while, did not agree at all with the idea that a class or two in transcultural nursing or intercultural communication would be any more useful than just going out in the real world to get some experience with people from other cultures (the throw the child in the water and s/he will learn to swim method of learning). However, this presumes that nurses who are in the field have the time in their hectic 8- to 12-hour day to really notice what is happening with their patients or hospital staff on an intercultural level, much less be able to learn from it. This researcher believes that the average person rarely gains anything from such a hit-or-miss experience, certainly not a greater acceptance of other cultures, or even an appreciation for the differences.

PROBLEMS ASSOCIATED WITH LANGUAGE ATTITUDE STUDIES

There are two ways of measuring language attitudes: directly (e.g., Schenk-Hamlin, 1976) by just asking people what they think about anything involving language (such as language varieties, personal language use, and preference or language policy) or indirectly by having people listen to speakers on tape, often the same speaker using different accents (for example using the matched guise technique developed in 1960 by Lambert et al.) or more than one speaker, each speaking with his/her natural accent. The problem with the direct method is fairly obvious: people will answer the questions the way they think they are "supposed to" answer them (Lambert, Anisfeld & Yeni-Komishian, 1965). But there are also numerous problems with the indirect method: the matched guise technique, types of subjects used in the studies, lack of varying social context for scripts, and the incompatibility of instruments used in the studies. Each of these problems will be discussed below.

Matched Guise Technique

Some of the earlier studies using the matched guise technique (see, for example, Anisfeld, Bogo, & Lambert, 1962; Lambert, Anisfeld & Yeni-Komishan, 1965; Giles, 1970, Strongman & Woosley, 1967) have been criticized for supposing that each population or subpopulation can be characterized by a single language variety (Agheyisi &

1970). This researcher's question when reading these studies was how can the average person really produce and maintain an authentic or realistic guise (without having it sound like a caricature) over the time needed to read a script? In the study done by Giles (1970) in England and Wales, a male speaker read a selected passage using an unbelievable 13 different foreign and regional accents. Even when a speaker is only asked to produce one guise that is not his/her normal way of speaking, s/he may hesitate more when producing it, causing listeners to rate it less favorably. Anisfield et al. (1962) speculated that although the English with a Jewish accent guise (EJ) speaker was rated lower for the trait confidence than the speaker with the (Canadian) English accent guise (E), this could have been because the normal guise for all of the taped speakers in this study was E, so the EJ guises each of them produced may have sounded slightly more hesitant, making them seem less confident. Rubin and Smith (1990) used two female graduate students whose native language was Chinese to record the two lecture topics for their study of undergraduate students' reactions to nonnative English speaking teaching assistants (NNSTAs). These speakers read the lecture topics once through using their normal conversational English voices (which Rubin and Smith called "moderately accented") and then were asked to read the lecture topics again, "to caricature a style of English that they felt Americans would typically associate with Chinese speakers" (p. 342). One has to wonder what this caricature sounded like and whether these speakers had gone too far in producing this guise, resulting in a guise that would be very easy to negatively evaluate or even ridicule. Only three of the studies included in this review of the literature used either a professional actor to produce accents (Giles, Henwood, Coupland, Harriman & Coupland, 1992; Lay, 1989) or the more affordable drama students (Ball, Giles, Byrne & Berechree, 1984).

Studies using a modification of the matched guise technique (e.g., Ensz, 1982; Gallois & Callan, 1981; Ryan & Carranza, 1975; Zahn & Hopper, 1985; Zahn, 1990), that is, several speakers from each accent group, run the risk of voice quality variables interfering with the listener's evaluations of the speakers, but this seems to be a more authentic method. Alford and Strother (1990) state that the speakers they used were screened (however, they do not say how) to control for variations in style and voice quality, so that the accent could be focused on (p. 485). Knops (1989) made several different recordings of each of the five speakers used in his study so that the final versions could be matched for speech rate and reading ability. De la Zerda and Hopper (1979) gave the most detailed report on which tapes were chosen for their study. Eight Mexican-American male graduate students, whose normal speech showed varying degrees of accentedness, read three simulated employment interview scripts. These tapes were evaluated in a pilot study by 52 undergraduate students who rated each tape on five seven-point scales that looked at the perceived accentedness and non-standardness of the speaker. A one-way analysis of variance (ANOVA) of the summed scale response revealed differences between the tapes that de la Zerda and Hopper called "accented" and "unaccented"(p. 129). The three tapes that received the highest positive mean evaluation, which meant the speakers on these tapes were more "standard-sounding," were then used for this study. Most authors, however, do not go into this much detail regarding how the tapes were chosen or how voice quality variables were controlled other than stating that they were controlled (e.g., Kalin & Rayko, 1978). And, in one interesting study by Huygens and Vaughan (1983), the authors were more concerned with exploring New Zealand's speech community because very few studies before theirs dealt with the social evaluation of speech there, that they were about controlling voice quality variables. They used tapes containing the spontaneous language (with a controlled topic) of thirty speakers from four language backgrounds (English immigrants, Dutch immigrants, Maori, and Pakeha, who are white New Zealanders). In the present study, the physicians were recorded three times for each context, and the best recording, the one with the fewest false-starts and pauses, was then chosen. This researcher did not pay as much attention as she could have to controlling for voice quality variables (such as using a spectrograph) as there were a limited number of available speakers.

Types of Subjects

The types of subjects used in language attitude studies have been criticized by very few researchers in the field (hinted at in Giles & Ryan, 1982). By and large, the subjects have been university or high school students. While students are very accessible to researchers, only choosing students as subjects for language attitude studies is bound to have some effect on results. Researchers who use students as their subjects claim that students still represent their culture (Kalin & Rayko, 1978) and that the perception of what sounds "correct" develops rapidly through childhood and reaches an approximate adult level by early adolescence (Giles, 1970). There have been other studies using teachers (e.g., Eltis, 1980; Hufford, 1991), proprietors of small business enterprises and residents of the same Australian suburb (Seggie, Fulmizi & Stewart, 1982), members of a senior citizen club in Australia (Ball, 1983) and those members of the French population with whom American speakers of French are likely to interact (Ensz, 1982). However, until now, no study of language attitudes has used nurses as subjects, which is unusual as many nurses work at teaching hospitals (many of which are conveniently located near universities where language attitude research might be conducted) which are also centers for research. Working in a research-oriented atmosphere may make these nurses more comfortable with the idea of being prospective subjects for research, which is why this researcher decided to do part of her study at a teaching hospital.

Lack of Variability in the Social Contexts Used in Scripts

Early on, Lee (1971) criticized the elimination of social context in dialect perception studies, stating "it seems pointless to examine the effect of dialect in a content-free vacuum" (p. 412) as subjects tend to rate speakers differently, depending on the topic the speakers are talking about. And Bradac (1990) believes that until recently (e.g., Ryan & Bulik, 1982) many language attitude studies have ignored the impact that context has on evaluative reactions to speech styles. This could have been because many of the early studies were experimental, and this would have influenced how they were done. Eliminating as many irrelevant influences, such as context, may have thought to have been necessary for control purposes. This belief assumes, however, that the preferred language variety is going to remain preferred, no matter what the context. The context in which a conversation takes place can affect the way a person perceives a speaker's speech style. This can be seen in the study done by Ryan and Carranza (1975) which indicated that although standard English was rated more favorably overall (in both the school and the home contexts), there was less of a distinction between standard English and accented English in the home context. The results of this study reinforce the researcher's belief that native speakers do not speak standard English at all times, but they do expect to speak and hear it spoken to them at school, in the workplace or in any professional setting (such as a hospital). The home is generally where people are more relaxed, and this includes the language they use; while outside of the home, especially in the workplace or any other setting where good performance is preferred, people tend to be on their best behaviour, using their best language. Giles and Ryan (1982) hypothesize that listeners would put more importance on the Attractiveness/Solidarity dimensions than on Competence/Status dimensions if they thought they were evaluating an accented English speaker in a relaxed, informal context, but vice-versa if they believed the situation to be a tense, formal context. Nonstandard forms and accented speech tend to be negatively perceived in contexts that are formal, while in informal contexts their use may identify the speaker as part of the group. Even at work, there are moments when one is not expected to be formal and use standard English. Thus, one might expect that a physician who is able to express himself/herself well in an informal context with other hospital personnel and with his/her patients, will be evaluated more positively by them.

Instruments Used in Measuring Language Attitudes

The traits being measured in language attitude studies are usually arranged either on a 7-point Semantic Differential scale (Osgood, Suci & Tannenbaum, 1957) or a 5-point Likert scale. The Semantic Differential is used because it is relatively easy to construct and usually highly reliable. According to Mueller (1986), "test-retest reliabilities and internal-consistency coefficients around .90 are common for well-constructed semantic differential scales used to measure the evaluative dimension" (p. 55). The 7-point semantic differential is often used because it is easier to get significant differences on this type of scale, versus a 5-point semantic differential scale. Semantic differential scale scores correlate very highly with scores from other kinds of scales, such as Likert. The Likert scale, if carefully constructed, can achieve reliability coefficients in the .80s with fewer items and much less effort than it would take for a Thurstone scale (Mueller, 1986, p. 46). While a Likert scale is less transparent than a semantic differential scale, it is also more difficult to construct.

In the 1960s, the traits on these scales were commonly selected according to the author's interests (e.g., Lambert et al., 1960). In the 1970s, language attitude studies began to focus on status (achievement) and solidarity (or friendliness) as being two important dimensions of social interaction that affect language use (Ryan & Carranza, 1975). Some researchers also used other researcher's scales or parts of their scales (e.g., Ball, 1983), which makes sense if the researcher wants to test the instrument's reliability. In 1985, Zahn and Hopper developed a semantic differential measure they called the Speech Evaluation Instrument (SEI), which is made up of three dimensions: Superiority, Attractiveness and Dynamism. The authors have assessed the reliability of each of the three dimensions (or subscales) by using Cronbach's coefficient alpha; the reliabilities for each of the subscales have exceeded .80 and in most cases exceeded .90 (Zahn & Hopper; 1991, p. 1). The SEI is a variation of the three dimensional scale developed by Mulac, Hanley and Prigge (1974) called the Speech Dialect Attitudinal Scale (SDAS). The three dimensions on the SDAS include Socio-Intellectual Status, Aesthetic Quality and Dynamism. As Giles and Powesland (1975) noted, because all of these researchers have used different instruments to measure language attitudes, research findings are difficult to compare. Although the findings of many language attitude studies are not comparable, it is interesting to see how theory-based and more statistically reliable these instruments have become in the last three decades. For this study, the researcher used a slight adaptation of Zahn and Hopper's SEI, which not only is highly reliable but also is the most recently developed instrument. How and why this researcher chose to adapt the SEI will be explained in chapter three.

INSTRUCTOR'S ATTITUDES TOWARDS ACCENTED ENGLISH

One type of person who has a lot of power in society is the instructor, because s/he decides which student will pass and which student will not. In other words, the instructor acts as a "gatekeeper." Many language attitude studies focus specifically on the topic of instructor's attitudes towards students who use accented English and how the resulting evaluation affects the students' learning capabilities. In the second language classroom, whether it is at the elementary school or university level, the instructor's attitude towards nonnative speaking students will not only affect how well these students learn the native language, but also how accepted they feel in the new culture, which may have a bearing on what these students choose to do with their lives. In a study done in Canada, Gougeon (1993) interviewed high school teachers about their experiences with English as a Second Language (ESL) minority students and found that a high level of ethnocentrism exists in the school system and schools are not committed to providing equal services to ESL students (which can also affect the ESL teachers' commitment to the profession), so that they can become linguistically and culturally competent.

Hufford (1991), in her master's thesis, looked at student-teachers' attitudes towards children with nonnative English accents. She found that some of the student-teacher ideas for dealing with a question asked by a student s/he could not understand were not very useful, such as "Suggesting a student employ voice modification," as this would probably not be understood by younger students or it might be misunderstood as a request for an increase in volume. Another suggestion, "Requesting information about a student's heritage" was not seen as polite because this is a question that indicates prejudice, at least in an integrated classroom of native and nonnative English speaking students, as the instructor would probably not ask his/her native English speaking students the same question.

Dreger (1991) looked at university professors' attitudes toward nonnative English speakers by having nine speakers from three accent groups (American, Japanese and Vietnamese) read a passage from Hemingway, which was audiotaped. These tapes were then played for the university professors, obtained by performing a systematic random sample, who then rated each speaker on a semantic differential scale. What was interesting about the instrument Dreger used was that it made clever use of attribution theory: each professor had to rate the speaker twice for each adjective pair, once for how s/he would evaluate the speaker in reference to the adjective pair and then for how s/he believed someone from outside the university would evaluate the speaker. He found that the ten professors in his study did rate the nonnative English speakers more negatively than the native English speakers, indicating that the pronunciation of a nonnative speaker is important outside the second language classroom.

Eltis (1980) points out that although teachers are in the best position to alter community attitudes towards language, often they are unusually conservative in their attitudes towards language, seeing themselves as linguistic "gatekeepers" of all that is correct in English. In an interview, Giles and Thakerar talked about the importance of an instructor being tolerant and accepting of diverse accents, stating that when "teachers reject children's accents, they are also rejecting them" (Dillon, 1980, p. 676), which, at the very least, may cause children to diverge even further away from the standard.

In the setting of a residency program, a first-year physician must perform and perform well to obtain a permanent place in the program. If this first-year physician is an International Medical Graduate (IMG), who is not only having difficulty dealing with his/her patient load, but also adjusting to life in the United States and communicating effectively, then his/her senior physicians, who are also instructors, may not be able to pinpoint exactly where this physician is experiencing the most difficulty and may decide s/he is not competent and should not remain in that particular program. In a study which surveyed 178 Internal Medicine residency directors, Gayed (1991) found that the residency directors rated International Medical Graduates' (IMGs) "fluency in English" (as determined during the interview) quite highly, giving it an overall mean of 4.30 out of a possible 5.00 on a Likert scale, as one predictor of how these IMGs subsequently performed during their Internal Medicine residency (p. 700).

EMPLOYERS' ATTITUDES TOWARD ACCENTED ENGLISH

In the occupational setting, the employer's attitude towards the potential employee is very important and because these two people are unfamiliar with each other, the language that is used, especially by the employee, also becomes very important. A number of studies (e.g., de la Zerda & Hopper, 1979; Kalin & Rayko, 1978, 1980; Seggie et al., 1982) have shown that how a speaker sounds not only helps determine whether s/he gets the job, but also what kind of job it is (e.g., managerial or assembler). In a study conducted by Singer and Eder (1989), 210 student subjects viewed 3-4 minute videotaped interviews of a Maori applicant, a Chinese applicant, a Dutch applicant and a white, non-accented New Zealand applicant. The Maori, Chinese, and Dutch applicants were filmed twice: once speaking non-accented English and again speaking accented English. They were all applying for two job openings: one high status (department manager) and the other low status (filing clerk). In their study there were no apparent interactions between job status, applicant ethnicity or applicant accent. What was interesting was that the subjects (undergraduate university students) claimed that they placed moderate importance, a mean importance rating of 3.01 on a 7-point rating scale (p. 30), on the accent of the applicant. However, this rating was in direct contradiction to the MANOVA results of the effect of accent on selection decisions. This suggests that "individual's cognitive processes are not always consistent with their subjective report on what they are doing" (p. 30). Although none of the language attitude studies reviewed deals with accented English and its affect on employee promotion, one could imagine that there might be a connection between the two. For example, the nonnative English speaking physician who posesses the greater amount of communicative competence in all situations involving patients, physicians, and other hospital staff, will be seen as a "better physician" than the nonnative English speaking physician who does not. And the better physician is the one who is asked to stay on at a hospital, as a staff physician, after his/her residency is completed. The very real connection that exists between a nonnative English speaker's accent and employment discrimination most likely also exists in the hospital setting.

HOSPITAL COMMUNICATION

Many of the articles available regarding hospital communication are about physician/patient communication (e.g., Hinkley, Craig, Anderson, 1989) or nursing journal articles (e.g., Wallace, 1993) and nursing school textbooks (Arnold & Boggs, 1989; Bradley & Edinberg, 1990; Fritz et al., 1984; Weeks, Calderon, Chappell & Carver, 1986) written to help nurses improve their interpersonal communication skills with hospital personnel in general, not just physicians. The materials that are solely devoted to physician/nurse communication tend to be primarily doctoral dissertations or papers presented at conferences (e.g., Cunningham & Wilcox, 1985). Articles reviewed by this researcher about the physician/nurse relationship tend to focus on one aspect: what a nurse should do when a physician gives her/him an order that s/he believes will negatively affect the patient (e.g., Cunningham & Wilcox, 1985). This has to do with what Stein (1967) called the "doctor-nurse game," which describes the indirect methods nurses use to communicate with a physician (especially when they do not agree with a physician), while appearing to be speaking directly but without being disagreeable and ruining their working relationship with the physician (p. 699). In this researcher's experience, this communication pattern seems to be used rarely with interns and second-year residents, who in general are more equal in status to the nurse (or perceived to be), but rather frequently with fifth- and sixth-year residents and attending (or staff) doctors. This observation is confirmed by Cunningham & Wilcox (1985) who state "with first-year residents, nurses may be more out of character when they communicate indirectly; with experienced physicians, directness may be more out of character" (p. 766).

The physician/nurse relationship has changed from that where the physician is omnipotent and the nurse (always a female in the 1950s, 1960s, and perhaps 1970s in some areas in the United States) is his subservient handmaiden to one that is more egalitarian and professional. According to Bradley and Edinberg (1990), nurses and physicians work best as colleagues when each respects the other, each believes the other to be competent, each is willing to cooperate and communicate and each has support from the hospital system to work collaboratively. At the teaching hospital where this researcher is employed, collaboration is the key to delivering safe, quality patient care. Good teamwork becomes especially important in these days of budget cuts and layoffs. Weeks et al. (1986), discussed a successful program implemented at a private teaching hospital in Houston, Texas to improve the relationship between the medical students and other hospital personnel, especially the nurses. Patient care suffers anytime when the team (composed of physicians, nurses, certified nursing aides (CNAs), secretaries and other hospital personnel) cannot get along. Once patient care begins to suffer the least that will happen is that other prospective patients will hear about it and choose to go elsewhere.

In terms of intercultural training and/or learning about diverse ethnic cultures, it was not until sometime after 1978, when Leininger wrote a book about transcultural nursing, the caring of patients from other cultures, that nurses may have begun to hear about this concept. However, it was not until the mid- to late-1980s that this concept was taught with any regularity in nursing schools (S. Poulsen, personal communication, July, 1994). Because of a federal grant regarding minority education, classes on transcultural nursing or some variation of it (for example, classes called cross-cultural nursing or nursing systems of healing) were offered at one Portland-area nursing school as early as the early 1980s (S. Porter, personal communication, May, 8, 1995). What is also important to know, however, is that the transcultural classes at this nursing school have always been elective courses (S. Porter, personal communication, May 8, 1995). This means that those who probably are in the greatest need of these types of classes are probably not the ones taking them. When this researcher was preparing to start this study, she did an informal survey of 19 nurses at the teaching hospital where she is employed, and asked them whether or not they had ever had any intercultural communication or transcultural nursing classes in nursing school. Nine nurses had had something, but this ranged from listening to a student presentation about different cultures to a class that devoted a section to different cultures. Only four nurses had had either a term or a semester of transcultural nursing or something similar, and these four nurses all graduated in 1992 or thereafter. This is very important information for nurses to be aware of as the patient population in the United States is rapidly becoming more diverse. This researcher has never seen articles or books written for nurses or nursing students that discuss how to work with IMGs, who now equal the number of those physicians graduating from medical school in the United States in Primary Care (or the Internal Medicine specialty): "50% of these physicians across the United States are IMGs" (Eggly & Headbloom, 1995). In an informal survey of recent nursing textbooks (e.g., Feetham, Meister, Bell & Gilliss, 1993; Friedman, 1992; Linton, Matteson & Maebius, 1995; Rosdahl, 1995) in the bookstore at one of the local nursing schools, this researcher found only information for nurses on how to communicate with patients from other cultures and this information was very general in nature and there was not much of it (the average length was approximately one chapter). General information on communication among the healthcare team was generally sparse in these surveyed texts (for example, one page in Rosdahl, 1995), so the researcher was not surprised when she was not able to locate anything on nurse/physician communication when the physician is a nonnative speaker of English.

SUMMARY

This review of the literature first looked at what this researcher believes are the basic aspects making up language attitudes, such as stereotypes, ethnocentrism, ethnicity, and ethnolinguistic vitality and identity. Knowing about these topics assists one in understanding why people often respond negatively to those they have determined are not part of their ingroup. Speech Accommodation theory, which defines shifts in speech style (both convergent and divergent shifts), provides useful explanation when one is looking at the attitudes that accompany these shifts or the lack of them. The last underlying topic making up the broader one of language attitudes is speaker competence and perceived intelligibility, as perceptions of a speaker's competence (real or perceived) greatly influences a listener's evaluations of that speaker.

Next, this chapter focused on the problems associated with past language attitude studies, especially the use of the matched guise technique, the overuse of college students as subjects, and the lack of variability in the social contexts used in the scripts. This section ended with a brief discussion of the various incompatible instruments used in past studies. The final section surveyed the results of language attitude studies that focused two examples of people in powerful positions, instructor's and employer's, and how their attitudes of nonnative English speakers could prevent these speakers from moving forward in life. This was followed by a look at hospital communication, which sets the stage for the present study.

THE PRESENT STUDY

The present study explored the issue of language attitudes in the hospital setting. More specifically, what language attitudes did nurses have towards physicians who speak accented English? Did they view nonnative English speaking physicians as less medically competent? Did the context in which a physician spoke (informal or formal) cause nurses to evaluate him differently? Were nurses who had recently graduated from nursing school and had had an introduction to intercultural communication, perhaps via the concept of transcultural nursing, more tolerant of a nonnative English speaking physician's speech? It is interesting to see that in all of the fields reviewed here, linguistics, social psychology, speech communication and nursing, that relatively few authors discuss the physician/nurse relationship and no research has been done on the physician/nurse relationship when the physician is a nonnative speaker. In this study, the researcher used a slight adaptation of Zahn and Hopper's (1985) SEI to measure a sample of Portland area nurses' perceptions of the speech of three male physicians (one, a native English speaker, and the other two nonnative English speakers) who spoke in both a formal and an informal context.

CHAPTER III

METHODOLOGY

A survey design was chosen for this study as the goal was to involve as many medical-surgical nurses as possible in order to use the Speech Evaluation Instrument (SEI) as it is meant to be used, with a fairly large sample. The independent variables were 1) country of origin (America, Japan, or Iran); 2) context (formal or informal); and 3) type of English spoken (accented or nonaccented). The dependent variables were the nurses' perceptions of medical competence as measured by the three dimensions (Superiority, Attractiveness, and Dynamism) of the SEI. A modified matched guise was used with the SEI. With a modified matched guise, the speakers who are chosen to be audiotaped only speak using their own natural accent and speaking style, not anyone else's (e.g., de la Zerda & Hopper, 1979; Gallois & Callan, 1981; Kalin & Rayko, 1978; Wible & Hui, 1985).

A male physician from each of the three accent groups was taped reading a short patient history, followed by a request directed towards a nurse, otherwise known as a "verbal order" (formal context) and finally, briefly describing his plans for the future after he finishes his residency (informal context). Medical-surgical nurses from three Portland-area hospitals, who were chosen by performing a systematic random sample, listened to each context twice, rating the physician on the SEI either during or immediately after the second time the context was played.

This chapter will describe the methodology of this study. First, the way that the physicians (or speakers) were selected will be discussed, then how the contexts were chosen will be described. Third, the selection method of the medical-surgical nurses who took part in this study will be discussed. The measurement instrument, the SEI, both the original 22-item short form developed by Zahn & Hopper (1985) and the 20-item form this researcher used for this study will be discussed. Finally, this chapter will explain not only the informal survey the researcher did before beginning this study, but also how the data was collected for both the pilot study and the actual study.

SPEAKERS

This study used three speakers, one each of the three countries of origin available (America, Japan and Iran). All three speakers were physicians either in the emergency medicine specialty or surgical specialty and were all in their first year (internship) in the residency program at the local teaching hospital. What determined the choice of which three physicians to use in this study was that looking at the list of physicians available, all three had to be in the same year of residency and in any given year, the researcher had to be able to find two or more nonnative English speaking physicians to approach to be in this study. Even with these two restrictions, this researcher was able to obtain three physicians whose voices did not possess any major distracting vocal qualities, such as nasality, which might direct the subjects' attention away from focusing on the accent. The physicians also needed to have some extra time (approximately 20 minutes for the native English speaking physician, and 45 minutes for the nonnative English speaking physicians) to participate in this study, and although interns are very busy, they tend to be slightly easier to approach on the whole, as they remember quite well what it was like to be a student and need other people's assistance in order to complete a project. The native English speaking physician in this study was from upstate New York and spoke standard English without a discernible regional accent. The nonnative English speaking physician whose first language is Farsi, went to medical school in the Midwest. As a result, his accent is not as pronounced as the accent of the third physician, who is also a nonnative English speaker. This physician's native language is Japanese and he is slightly older than the first two interns as he was already a surgeon in Japan who decided to do another residency to become a cardiac surgeon.

Male physicians were chosen to participate in this study because there are more males (both native and nonnative English speaking) in the surgical and emergency medicine specialties, so using male physicians not only reflects the "real world," but also gave this researcher a greater number from which to choose. Female physicians and female nurses also relate to each other differently and that is beyond the scope of this study.

Oral Proficiency (English) of the Nonnative English Speaking Physicians

The nonnative speaking physicians all took the Speaking Proficiency English Assessment Kit (SPEAK) test individually on three separate occasions in September 1994. Originally three nonnative English speaking physicians, two native speakers of Farsi and one native speaker of Japanese, were approached to take part in this study, took the SPEAK test, and were recorded reading the formal context and giving an impromptu statement regarding their future plans for the informal context.

The physician whose native language was Farsi had an overall comprehensibility score of 290/300, which means he was "completely comprehensible in normal speech, with occasional grammatical or pronunciation errors in very colloquial phrases" (Guide to SPEAK, 1987, p.8). His rounded score on pronunciation was 3.0/3.0, indicating "occasional nonnative pronunciation errors but speaker is always intelligible" (Guide to SPEAK, 1987, p.8). His rounded score on grammar was 2.9/3.0, indicating "sporadic minor grammatical errors that could be made inadvertently by native speakers" (Guide to SPEAK, 1987, p.8). His rounded score on fluency was 2.8/3.0, indicating "speech is smooth and effortless, closely approximating that of a native speaker" (Guide to SPEAK, 1987, p.9). The overall comprehensibility score was why this native-speaking Farsi physician was chosen over another native Farsi physician who also took the SPEAK test and whose overall comprehensibility score was 270/300.

The physician whose native language was Japanese also had an overall comprehensibility score of 290/300. His rounded score on pronunciation was 2.8/3.0, indicating "occasional nonnative pronunciation errors but speaker is always intelligible" (Guide to SPEAK, 1987, p.8). His rounded score on grammar was also 2.9/3.0. His rounded score on fluency was 2.7/3.0, indicating "speech is smooth and effortless, closely approximating that of a native speaker" (Guide to SPEAK, 1987, p.9). Thus, the two nonnative English speaking physicians who participated in this study both had an overall comprehensibility score greater than 250, what an international medical graduate (IMG) would have to score to be successful in a residency program (Eggly & Schubiner, 1991). For a full description of the interpretation of SPEAK test results and evaluation score sheets, see Appendix A.

THE SCRIPTS

The scripts contained three sections: two sections made up the formal context and the third section was the informal context. The formal context (see Appendix B) was a brief patient history, four sentences in length, similar to what one would hear on morning rounds. Following this was a short directive, one sentence in length. This directive is directed toward a nurse and is usually known as a "verbal order," and it pertains to the patient the physician describes in the brief patient history. This formal context was obtained in June 1994 from two fifth-year and one sixth-year physicians, who have had a great deal of experience summarizing patient histories for rounds and giving nurses verbal orders. The formal contexts were obtained from two surgical residents and one othropaedic resident on an individual basis. This researcher asked each physician for a four sentence patient history, similar to what one would hear during rounds, followed by a one sentence verbal order. This was an easy task for each of the three physicians and this researcher merely wrote down what they said, and then had each physician check what had been written to make sure it was accurate. This researcher wanted to obtain three scripts so that each of the three physician-speakers participating in this study would have a different script to read, because Lee (1971) believes that repeated content-controlled messages have no real world corollary other than in a receiving line. Although all three of the formal contexts were the same length when written down, when the physicians read them aloud, they were not exactly equal in length (although close enough, given the differences in speech rate between the three physicians): 2.2 minutes in length for the native English speaker, 2.7 minutes in length for the native Farsi speaker, and 2.9 minutes in length for the native Japanese speaker (all times were rounded to the nearest seconds).

The informal context (see Appendix C) was a brief impromptu answer, five sentences in length, each of the physician-speakers gave to the question "What are your plans for the future after you finish your residency?" Of course, some physician-speakers used longer sentences or paused more than others, so the actual length of this section varied (all times were rounded to the nearest second): 1.8 minutes in length for the native Japanese speaker, 2.8 minutes in length for the native English speaker, and 4.8 minutes for the native Farsi speaker. Ideally, both the formal context and the informal contest were to be the same length, five sentences each, so that the subjects would not be overly influenced by lengths. However, even though the formal and informal contexts were not exactly the same length when spoken (the mean utterance length of the formal context was 2.6 minutes and the mean utterance length of the informal context was 3.1 minutes), still, allowing the subjects to hear the speakers in two very different contexts , giving different types of messages, follows the suggestions of recent articles (see, for example, Bradac, 1990; Giles & Ryan, 1982; Jackson & Jacobs, 1983; Zahn & Hopper, 1985).

Audiotaping the Physicians

The first physician to be audiotaped was the native English speaking physician because he was an intern on the floor where this researcher is employed and he had some free time one day. As it was a weekend, the department director's office was not in use, so this was a quiet place where he recorded both the formal context and the informal context. After reading through the consent form provided by the researcher (see Appendix D for the doctors' consent forms), he signed it. Then he looked at the three formal contexts this researcher had typed up and chose one to read. The researcher then made certain that he knew how to record himself, using a Sony Pressman microcassette recorder. He was told to read through the formal context twice, pausing between the patient history and verbal order. This researcher now wishes she had mentioned something about rate of speech to this particular physician, as he spoke very quickly during the two times he read through the formal context. Before recording, he was asked to temporarily surrender his beeper to this researcher, who told him that she would answer any pages and if it was an emergency, would interrupt his recording. After he was finished recording the formal context, this researcher told him to imagine himself "chitchatting at the front desk (the nurses' station), getting to know people at work" and answer the question "What are your plans for the future after you finish your residency?" using exactly five sentences. This instruction may have made the resulting answer less naturalistic. This researcher should have merely asked them to answer the question and then taken the first 2 minutes or so from their answer to use for the informal context. This answer was also recorded twice. After the physician was finished recording, this researcher gave him a $6.00 Starbuck's gift certificate for his time (20 minutes) and his effort.

The second physician, the native Farsi speaker, who was also an intern on the medical-surgical floor where this researcher is employed, was recorded after he had completed the SPEAK test. Before taking the SPEAK test, he read through and then signed the consent form provided by this researcher (see Appendix D). He looked at the two remaining formal contexts and chose one to record. This researcher then followed the same protocol (already explained above), in terms of explaining to the physician how to record both the formal and the informal contexts. This physician's free time happened to be during the week, on day shift (which is 7:00 am to 3:30 p.m., on the floor where this researcher works), so consequently the floor was very busy and it was more difficult to find a quiet place that could be used for 45 minutes or so. He ended up taking his SPEAK test and recording both the formal and informal contexts in the back physician's office, which is seldom used, even during the day. This researcher took the precaution of taping a large sign to the door of the doctor's office at eye level. However, one fifth-year resident still just walked into this office while the physician was trying to record the formal context, so that section had to be re-recorded. Again, this researcher held onto the physician's beeper for a nerve-wracking 45 minutes (luckily, no one paged the physician). This physician was given $20.00 cash and the results of a free SPEAK test for his time and effort.

This researcher felt the most comfortable with these first two physicians as she knew both of them quite well before they participated in this study. They had both been interns on her floor at least three weeks, in the case of the native English speaking physician, and nearly six weeks, in the case of the native Farsi speaking physician and they were both planning to become Emergency Room physicians, a type of physician with whom this researcher frequently interacts. They both unhesitatingly agreed to take part in this study. However, the native Japanese speaking physician, who was planning to become a Cardiac surgeon, had never been an intern on the floor where this researcher is employed and would not be according to the schedule of interns available on every floor (he was doing rotations on every other service but the ones on this researcher's floor). He was different in other ways from the other two physicians: age, professional background, and familiarity with the specialties used in the formal scripts of this study. Whereas the native English and native Farsi speaking physicians were both in their late twenties, this researcher estimated the Japanese physician to be in his mid- to late thirties. He had also already had experience as a physician in Japan as a surgeon before entering this residency program, while the other two physicians were fresh from medical school. In the current study, the native English speaking and native Farsi speaking physicians both read patient histories from specialties with which they were familiar (trauma or general surgery), while the native Japanese speaking physician read a patient history about an orthopaedic patient, a specialty with which he was unfamiliar.

In order to contact the native Japanese physician to see if he would be interested in participating in this study, the researcher had to look up his schedule and have him paged at a different hospital, where he was doing a rotation. It took two phone calls to fully explain the study and persuade him to participate. At first, he was very reluctant to participate, which would have been disastrous as there were no other nonnative English speaking interns left to choose, and this researcher wanted to have three physicians from three different countries of origin in her study. Interestingly, he did not believe he was suitable as he did not perceive himself as speaking accented English (because he had both traveled to and lived in English-speaking countries).

This researcher met the native Japanese speaking physician in the cafeteria at the hospital where he was doing his rotation. Luckily, it was after lunch, so there were few people in the cafeteria and there was a private dining area for physicians where he took the SPEAK test and recorded both the formal and informal contexts. There was another physician dining in this room, but after he saw the recording equipment that was being set up, he opted to finish eating in the cafeteria, so this physician had some privacy. After reading and signing the consent form (see Appendix D), the physician took the SPEAK test. Because this researcher was unfamiliar with this hospital and this physician, she did not ask for the physician's beeper. However, no one paged him during the time he was recording. After he was finished with the SPEAK test, this researcher made sure he knew how to use the tape recorder and followed the same procedure that she had with the first two physicians in terms of explaining how to record both the formal context and the informal context. After he had completed his recording, he also received $20.00 cash and was promised the results of his free SPEAK test. This researcher now wishes that she had listened to each of the physician's recordings at the time she was recording each physician, but she did not want to take up anymore of their time. When she listened to this physician's informal context, she had discovered that he had paused after each of the five sentences, giving it a very choppy affect. So, this researcher had to contact him again (she waited until he was back doing a rotation at the hospital where she is employed) and asked him to redo the informal context. His informal context was much shorter than the other two physicians' and this may be partially due to the fact that he did not know the researcher and partially due to his cultural background. According to Condon (1984), "speaking too much is associated in Japan with immaturity or a kind of empty-headedness" (p. 40). The type of self-disclosure this researcher was asking for may have been too difficult, if not inappropriate, for a person from this culture.

THE SUBJECTS: MEDICAL-SURGICAL NURSES

The reason that nurses were chosen to be the subjects in this study instead of any other hospital personnel is that they not only work with physicians daily, but as Wenrich, Carline, Giles & Ramsey (1993) noted "in an era which the importance of physicians' communication skills and humanistic qualities for optimal patient care has been emphasized repeatedly, nurses may be an appropriate professional group to consider as evaluators of these specific aspects of physician performance" (pp. 685-686). Medical-surgical nurses who work in the adult medical-surgical areas of the hospital were chosen on the basis of their familiarity with surgical residents and the patients they care for. Other nurses who work in a clinic or in a specialty area (e.g., pediatrics, psychiatric, intensive care or mother-baby) were not included in this study because they are either not as familiar with or as interested in surgical patients, the type of patients the physicians in this study are talking about. Either of these reasons might affect the evaluations of the speakers. In the high-tech world of intensive care, for example, physicians often have a lower status than they do out on the floor because the nurses have more skills that overlap with the physicians'. Intensive care nurses often do what the patient immediately needs and then get the physician to write an order afterwards.

Only female nurses were chosen to participate in this study as there are more female nurses than male nurses in general and this gave the researcher more potential subjects to choose from. Also, male nurses and male physicians relate to each other differently (as do female nurses with female physicians) and that is beyond the scope of this study.

The medical-surgical nurses were chosen by performing a systematic random sample. This involved taking the third name from lists of staff nurses that were obtained from the department director of participating hospital units. Once names were chosen, this researcher would write the nurse's name on top of an introductory letter (see Appendix E for a sample letter) and place it in her mailbox. The researcher would wait at least two to three days before going onto the floor and beginning to approach the selected nurses in person. If a nurse did not wish to participate, she would then tell the researcher and the next nurse on the list would be chosen in her place. Participation, or non-participation, did not affect the nurses' job at their hospital. All of the nurses identities remain confidential, as their names do not appear anywhere on the questionnaire and the consent forms, which are signed by the nurses, are kept separately from all of the questionnaires.

PARTICIPATING HOSPITALS

The hospitals in this study were selected either because it was the researcher's place of employment or for their proximity to the researcher's home. The first hospital (from hereon referred to as Hospital A) where this study took place is a 354-bed hospital that is part of a prestigious School of Medicine and nationally known center for research. It is also a state hospital that serves the local indigent. In addition, it is the number one trauma center for Oregon and southwest Washington, so consequently, it is a very busy place. The second hospital (from hereon referred to as Hospital B) is a 250-bed hospital that is part of a national health care chain. The third hospital (from hereon referred to as Hospital C) is a 556-bed hospital that is part of the same national health care chain as Hospital B. It is also the number two trauma center for Oregon and southwest Washington.

The researcher went to these Portland-area hospitals in hopes of obtaining a sufficient number of subjects, which according to Nunnally (1978) should be ten subjects for every variable. The goal was to have 200 subjects for this study; however, only 164 medical-surgical nurses participated in this study: 87 from Hospital A, 42 from Hospital B, and 35 from Hospital C. Not being able to obtain 200 subjects was due to several factors including getting clearance from department directors of medical or surgical floors and time. This researcher's research proposal was reviewed by a total of three Human Subjects Committees to obtain permission to do this study: her university, the teaching hospital where she is employed, and finally the Human Subjects Committee that oversees research at the other two hospitals. Two different consent forms were created: one to fit

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the standards of Hospital A and the other to fit the standards at Hospitals B and C. Also, at Hospitals B and C, this researcher had to find a physician to sponsor her study. Not knowing any of the staff physicians there, this researcher followed the advise of the secretary in the Human Subjects office and called up the chief of surgery at Hospital B, found out the address of his office, and sent him a packet of information regarding this study. This researcher was extremely fortunate that he kindly agreed to be the sponsor and that he quickly filled out the needed Human Subject forms. For his kindness and effort, he received a $6.00 Starbucks gift certificate and a magazine subscription for his office.

Once permission was obtained to do research at the teaching hospital, this researcher was able to obtain clearance to be on every medical-surgical floor (nine total) plus full access to the adult medical-surgical float pool nurses, in the hospital. This was partly due to some of the department directors knowing her, others knowing the department director this researcher works for, and partly because the Associate Director of Nurses "unofficially" sponsored her study (because this researcher is an employee at the teaching hospital, her study was not required to have a sponsor) and had written a letter for her that was attached to all of the introductory letters (see Appendix F for a sample letter) sent out to the department directors. At the teaching hospital time was the issue for nurses to be able to participate. Everyone was so busy at this hospital either because of the number of patients each nurse was required to care for or the type of patients this hospital has (in terms of how ill they are) that many nurses, while interested, did not have the time or energy to take part.

This was not the case at the other two hospitals, where getting clearance to do the study or even just knowing which floors were considered medical or surgical floors was the issue. This researcher had naively assumed that once one obtained permission from Human Subjects that the way would be clear to do research. She soon discovered that this was not the case. At Hospital B, there were seven areas that this researcher targeted after finding out from a nurse who was a former employee there that these were considered medical-surgical floors. After sending the department directors (five total, as some were the department director for more than one area) a packet of information about this study, which included the Human Subjects approval letter and a copy of the questionnaire, three agreed to give this researcher complete access to their staff and floor, and one agreed to give this researcher access to the staff list and the nurses' mailboxes, but would not allow this researcher to come onto the floor unless a nurse had first called to set up an appointment time. Consequently, although the researcher placed approximately 30 letters into the mailboxes of selected nurses on this particular floor, no one called, so no nurses on this floor were included in the study. The fifth department director just said no, her staff was so busy that asking them for 15 to 20 minutes of their time would be too much. She did not want this researcher on her floor, bothering the nurses and making them feel obligated to participate. Basically, this researcher discovered that those department directors who are interested in research themselves were the ones who allowed this study to take place on their floor.

This researcher was very unfamiliar with Hospital C and had no connections there so it was difficult just to find out what was considered a medical or surgical floor. She contacted the staffing office twice at this hospital to find out the names of department directors of the adult medical or surgical floors that were not intensive care. The staffing office originally gave her the names of two department directors, and because this researcher had difficulty believing that a hospital this size only has two adult medical-surgical floors, she called again and got a third name, and decided that that was as far as she would be able to get at this hospital. Fortunately, all three of these department directors agreed to allow this researcher full access to both their staff and their floor. Not being familiar with and not being able to find out exactly which areas are medical-surgical ones at Hospital C accounted for the relatively low number of nurses who participated in this study. This researcher now wishes that she had done more groundwork at this hospital to try to find out the exact number of adult medical-surgical floors.

There are some reasons why there have been few language attitude studies done outside of the university or school setting. One reason is travel time, it is simply takes more time to get to another place to do research, especially when one relies on the public transportation system, as this researcher did. Another reason, connected to the first one, is convenience. It is simply more convenient to do a study where one works ; many of the researchers in this field are employed in the university or school setting (Alford & Strother, 1990; Fayer & Krasinski, 1987; Zahn & Hopper, 1985). It is also easier to do a study where one has personal power. Students who are subjects, especially when the researcher is also their instructor, are probably a lot less likely to refuse to participate than are subjects who are not involved in any kind of power relationship with the researcher, or who may see themselves as having more status than the researcher. During the time this researcher was collecting data, she rarely felt as though nurses thought she was inferior, however, she was careful to stress that she was a graduate student working on her master's degree (as the majority of the nurses in this study have either a two year associate's degree or a 4-year bachelor's of science in nursing) over the fact that she is also employed as a unit secretary (who often have less status than nurses).

Yet another reason language attitude studies are done in the university or school setting is money. Out in the real world, people may not always demand to be compensated for their time, but the unspoken expectation is there. This researcher also believes it is a courtesy to compensate people for their time, even if it is just a token. The final reason is time. It takes an inordinate amount of time and effort to set up a study: going through Human Subjects at each hospital, getting sponsors, contacting department directors, getting the staff lists to do a selected random sample, putting an introductory letter in the selected nurses' mailboxes and, after a few days, finally approaching the nurses in person. Some days were better than others, in terms of nurses being able to participate in the study. Perhaps the day one has come onto the floor, the floor is short-staffed, with all the nurses having one to two extra patients to care for. Or, none of the nurses that were selected are working that day, or maybe they were, but they got to go home early because the floor is not busy enough. Or, perhaps the nurse that was selected only works one day every week, and that day has already passed. If this researcher had been able to line up all of the nurses who had participated in this study and administer the study individually (the way it was usually done in this study), at an average of 20 minutes each, it would have taken roughly 55 hours to do. Of course it really did not happen that way and it is very difficult to estimate all of the time this researcher spent waiting for nurses to be able to get some time to participate. The researcher collected data at Hospital A from the third week of October (pilot study) to the third week of December, spending an average of four hours a day there. Data collection went much more quickly at Hospital B: the researcher was there from the third week of December to January 2nd, 1995, but during that time period she took four or five days off and only averaged about 6 hours a day there, for 10 days. At Hospital C, the researcher collected data for about four weeks, spending an average of four hours a day there.

INSTRUMENTS AND MATERIALS

The Speech Evaluation Instrument (SEI)

The SEI was developed by Zahn and Hopper (1985) in hopes of integrating research in the area of language attitudes, which in the past has used various and incompatible instruments to measure evaluative reactions to speech. The semantic differential form of scaling developed by Osgood, Suci and Tannenbaum (1957) is used for this instrument as Zahn and Hopper believe it is "the most appropriate to the general nature of the type of evaluation being assessed" (p.116). The three subscales that comprise this instrument are superiority, attractiveness, and dynamism. The superiority dimension measures evaluations of listeners' expectations regarding speech characteristics that are associated with education and advantage. The attractiveness dimension measures evaluations indicating the beauty and social appeal of speech. Last, the dynamism dimensions assess evaluations of the activity level, confidence and social power evidenced by a speech style.

In its original form, the 30-item SEI, has been very reliable. In their users' guide to the SEI (Zahn & Hopper, April 1991) state that using a Cronbach's coefficient alpha, the reliabilities for each of the subscales (superiority, attractiveness and dynamism) has always exceeded .80 and in most cases .90 (p. 1). Zahn (November, 1990) has also conducted research supporting the construct validity and discriminative validity (he compared the SEI with the Interaction Involvement Scale, which measures self-perceptions). The authors developed the short form SEI by using only those items exhibiting consistent and high loadings from their various studies done in the mid- to late-1980s using the SEI (Zahn & Hopper, April, 1991)

This study used a modification of the matched guise technique, where each speaker speaks using only his own natural accent and speech style. Using a modification of the matched guise technique is seen by many researchers to be more "naturalistic" (e.g., Alford & Strother, 1990; Ryan & Carranza, 1975; Wible & Hui, 1985) and in a predominantly monolingual society such as the United States, it is much easier to find speakers for this type of procedure, especially when one is looking at speakers who are not usually required to learn a second language, much less speak it fluently.

Although it is generally best not to modify an instrument, especially a new one such as the SEI. because of the number of subjects in this study and the limited amount of free time nurses have at work, the researcher believed that it would be necessary to further shorten the short form of the SEI, a 22-item version of the original 30-item long form.

Results of the pilot testing this short form revealed three items that the nurses believed were not applicable to physicians. Three sets were removed after the pilot study (lower class/upper class, white collar/blue collar and sweet/sour), leaving 19 remaining items. The researcher also tested an additional item from the scale Dreger (1991) used to examine university faculty reactions to nonnative student's speech: vague/precise, which replaced one of the items removed from the superiority dimension on the SEI after the pilot study (see Appendix G for which items load on the three factors from Zahn & Hopper (1991) for the 22-items). This researcher believes that this is a common adjective pair used to describe a person's speech and appropriate to the medical context in which this scale was used and apparently the nurses in the pilot study thought it was also appropriate as none of them selected it for removal from the study. Altering the SEI may have had some affect on the results of this study where the factor analysis is concerned, as it did not turn out the way this researcher thought it would (see Chapter Four, beginning on page 67).

The SEI used in the actual study was followed by six demographic questions (see Appendix K), two of which were in the form of a statement and used a Likert scale. The researcher wanted to see how strongly the nurses in this study agreed or disagreed with the two statements "I am comfortable communicating with people from other cultures" and "I work well with people from other cultures." The researcher believed that this was a more direct way of asking the nurses how they perceive themselves communicating or working with those from other cultures.

The Tapes

There were three tapes used in this study. Each tape was recorded on a Sony Pressman microcassette recorder, chosen for its resemblance to the ones physicians use when they are on rounds. The researcher thought that this would make each physician who participated in this study less self-conscious and reduce any unnecessary strain in his voice.

Using a Kenwood Stereo Cassette Deck (model KX-500) equipped with an equalizer to ensure quality reproduction, the microcassette tapes were then transferred onto regular-sized audiotapes. Each tape was assigned two numbers: only the first number is relevant, the other is a distracter. If the first number is a five, the speaker on the tape is the native English speaking physician. If the first number is a seven, the speaker on the tape is the native Japanese speaking physician. And if the first number is a nine, the speaker on the tape is the native Farsi speaking physician. This was done so that the subjects could not identify the speaker's ethnicity by looking at the label of the tape. This also lead to many a nervous question about just how many tapes this researcher was planning to play.

The Pens

The researcher gave a pen on a rope to every nurse who participated in this study. They used these pens to record their answers on the questionnaire and then got to keep them. Although they were only 95 cents each (as opposed to some pens on rope that cost as much as $2.99 each), buying 200 cost the researcher a little over $200 dollars, because of the shipping costs. The researcher picked pens on a rope to give because having worked at a hospital where pens are in short supply and people are always taking pens away from each other, she knew this would be something most nurses would find useful. Of course, there were some nurses who intensely disliked pens on a rope, but they said they would give theirs to their child (or grandchild). This researcher believes that the purpose of giving something to one's subjects is not to please everyone, but rather to give the subjects something to thank them for their time.

INFORMAL SURVEY

Before this researcher began her study, even before her proposal meeting, she did an informal survey of a group of nurses (see Appendix H for the survey questions and the results). These nurses (N=19) were either ones who worked on the floor where this researcher is employed or they were employed on another floor and just happened to come by for one reason or another. The researcher was interested to find out what year each nurse graduated from nursing school and whether any of them had had a transcultural nursing class or anything similar, such as intercultural communication, while in nursing school. The goal was to find out when transcultural nursing, a concept developed by Leininger in 1978, was beginning to be taught in the local nursing schools. The years the nurses had graduated from nursing school ranged from 1974 to 1994, a twenty-year range. Out of 19 nurses, 10 nurses had received some kind of information about intercultural communication, but it was a little as 1) listening to one student presentation for one nurse (she graduated in 1993); 2) listening to one lecture by an instructor for one nurse (she graduated in 1990); 3) having a semester class focusing on cultural diversity for one nurse (she graduated in 1993); or 4) having a section of a class devoted to the discussion of different cultures (usually focusing on death, the perception of pain in different cultures) for four of the nurses (years of graduation: 1974, 1985, 1988 and 1993). Only three of the nurses had had a transcultural nursing class per se, lasting a complete term or semester (years of graduation: 1992, 1993 and 1994). A nurse who graduated in 1974, who had not received any information about either transcultural nursing or intercultural communication, says she learned the hard way, by putting her foot in her mouth. She grew up in Minnesota listening to her mother say, "You paid too much, you really got Jewed." Of course what people grow up hearing is what they end up saying (without thinking about the consequences), and as a result, this nurse said something similar to a patient who just happened to be Jewish.

The limitation of this questionnaire is its sample size and that the researcher did not ask if either transcultural nursing or intercultural communication was available as an elective and was just not taken by the nurse for one reason or another. Looking at this informal survey, this researcher now wishes that she had asked all 164 nurses participating in this study these questions as it would have contributed greatly to the findings of this study.

THE PILOT STUDY

Subjects

A pilot study was done with a group of nurses on the medical-surgical floor where the researcher is employed (N=15) in October, 1994. All of the participants were female.

They were volunteers, so three of the nurses that took part in this pilot study were nonnative speakers. The pilot study took place in the staff lounge on the floor and the nurses participated individually or in groups of two.

Materials and Procedures

The experiment was introduced as being concerned with which of the SEI's items are suitable for nurses to use to rate physicians' personalities, especially when only a limited amount of information is available. First, the nurses read over and then signed the informed consent (see Appendix I). Next, they were given an explanation of how to use a semantic differential. The researcher randomly chose which tape to play first, second and third. The nurses listened to the first speaker speaking in the formal context once through, without marking anything. Then they listened a second (and sometimes a third time), keeping in mind the phrase "The speaker sounds" as they quickly and spontaneously filled out the 22-item SEI with the extra adjective pair added on at the end (see Appendix J for pilot study questionnaire). The nurses were urged to go with their first reaction to the speaker, and place their checkmark accordingly on each continuum. Then the nurses listened to the first speaker speaking in the informal context. After listening a second time (or sometimes a third time), the nurses quickly and spontaneously filled out the same 23-item form. This procedure was repeated for the second and third speakers.

After the nurses listened to all three speakers and completed two 23-item SEI for each speaker, they were asked what they thought about the design of the study and which adjective pairs if any they believed were not applicable to physicians. They were also asked what "year" they believed the physician was in his residency program (i.e. intern, second year resident, third year resident). Finally, these nurses were also asked to assist the researcher in operationalizing "perceptions of medical competency" by asking how they determine whether a physician is medically competent.

Discussion of Results

The results of this pilot study confirmed that there were some items that nurses would find applicable to physicians. These three items were lower class/upper class, white collar/blue collar and sweet/sour. Even though these items are not meant to be taken literally, if the item sweet/sour bothered these nurses enough that everyone of them made a negative comment about it, this researcher believed that to leave it in would be to risk some of this instrument's face validity. Consequently, these three items were left out of the questionnaire. Most of the nurses believed that the physicians they were listening to were either a second year resident (9) or a third year resident (5), so using the scripts obtained from fifth and sixth year residents for the formal context helped. Only three nurses thought the physicians they had listened to sounded like interns (two nurses chose more than one category to answer the question "What year of residency do you think this physician is in?").

THE ACTUAL STUDY

The Subjects

The subjects were 164 nurses from three Portland-area hospitals who were selected by performing a selected random sample, choosing every third name on the staff list obtained from the department director of each participating floor. The data collection period for the actual study ran from the last week of October, 1994 to January 31, 1995.

87 nurses from Hospital A , 42 nurses from Hospital B and 35 nurses from Hospital C took part in this study. The majority of the nurses listened to the tapes and filled out the questionnaire individually, as it took less of their time to carry out the study this way. In the end, only 156 responses were used. Questionnaires were not counted if the nurse did not fully complete them (missing more than two adjective pairs made the questionnaire incomplete), if the nurse was male, or if the nurse was a nonnative speaker of English. Out of 164 questionnaires, only eight were not counted.

Materials and Procedures

The study was conducted on a hospital-by-hospital basis, with Hospital A being the first hospital, followed by Hospital B and finally, Hospital C. The study generally took place in the staff lounge on each floor. The nurses were told that they would be taking part in a study that was concerned with how nurses rate physicians' personalities when only a limited amount of information is available. They were then given a consent form and a pen on a rope and asked to read through and sign the consent form, identical to the one used in the pilot study, for the nurses at Hospital A or a slightly different form for the nurses at Hospitals B and C (see Appendix I for the consent forms used at all three hospitals). The Sony CFS-200 Radio Cassette-Corder was set up as the nurses were reading their consent forms and one of the tapes was chosen at random (at Hospital A) or chosen so that the first tape was not the native Japanese speaker (at Hospitals B and C). The researcher eventually stopped selecting the tapes in a completely random manner because when the native Japanese speaker's tape was played first it tended to make the reason for the study all too clear. The 20-item SEI followed by six demographic questions (from hereon referred to as the questionnaire, see Appendix K) was distributed and the nurses read through the instructions before receiving an explanation on how to rate the speaker by using a semantic differential scale. Before beginning, they were told that it was important to give a rating for each adjective pair and to answer all of the demographic questions. They were also urged to go with their first reaction to each speaker and to place their checkmark accordingly on each continuum. The researcher followed the same procedures as the pilot study: the nurses listened to each speaker speaking in each context twice, quickly and spontaneously rating him either during or immediately after the second time. The nurses filled out two 20-item SEI for each speaker (one SEI for each context), so each nurse filled out a total of six SEI for the three speakers. After completing the questionnaire, the nurses were allowed to ask questions or give their opinions about the study. The entire procedure took an average of 20 minutes.

Data Analysis

The data was analyzed by using a number of statistical procedures including factor analysis, reliability analysis, tukey tests, t-tests, analyses of variance, and multivariate analyses of variance. The results of these procedures are discussed in Chapter Four.

CHAPTER IV

RESULTS

This chapter first looks at the results of the factor analysis of the adapted Speech Evaluation Instrument (SEI) used in this study, then discusses the validity and reliability of the SEI, and finally lists each of the research hypotheses posed in Chapter I with the corresponding results. There are five areas of research: pronunciation and medical competency, native/nonnativeness and ratings on the SEI, formal/informal contexts, year of graduation from nursing school, and overseas experience. Only the Hypotheses for the last two areas of research, year of graduation from nursing school a[illegible]rseas experience, are reported from this point on.

FACTOR ANALYSIS

Because the SEI is still a relatively new instrument, Zahn and Hopper (April, 1991) recommend that an analysis of the underlying structure is done whenever a researcher uses the SEI. The factor analysis in this study was done for confirmatory purposes. The statistician, Dr. Bob Fountain, interpreted the data using both an orthogonal factor solution (Varimax) and an oblique factor solution (Oblimin). According to Comfrey (1973), "there is little agreement on what method of rotation gives the 'best' solution in some scientific sense" (p. 13); therefore, every statistician has his/her own preference as to which factor solutions s/he believes are appropriate. Orthogonal factor solutions are those where the factor axes are left at right angles to each other and the factors are then uncorrelated (Comrey, 1973, p. 15). This is a traditional method of factor analysis; one which, according to Comrey (1973) is not only easier to understand but also simpler to compute. If the angles between factor axes depart from 90 degrees, the factors are no longer uncorrelated with each other and the solution is referred to as an oblique solution (Comrey, 1973, p. 15). The oblique solution also allows the factor loadings to go over 1.0, although loadings this large are often not encountered (Comrey, 1973). Again, these are merely two ways to perform a factor analysis.

It was expected that the twenty items from the current investigation would load fairly evenly on the three factors Superiority, Attractiveness, and Dynamism. This researcher had thought seven items, including the new item vague/precise, would load onto the Superiority subscale, seven items onto the Attractiveness subscale, and six items onto the Dynamism scale, because this is how Zahn and Hopper (April 1991) said these 19 items (out of the original 22 items from the short form) would load.

After a varimax rotation (see Appendix L for the oblimin rotation), three meaningful factors did emerge. The results of the factor analysis confirmed the researcher's expectations that the dependent variables, the twenty items, would fall into three subscales. An item was considered loaded on a factor if its loading was greater than 0.50 and all of its other loadings were smaller. As Comrey (1973) states, "the higher the factor loadings, the greater is the degree of overlapping true variance between the data variable and the factor and the more the factor is like the data variable in question" (p.

224). The means for the primary loadings for the solution in Table 1 were 0.79. 0.67, and 0.64. The three factors accounted for 60.5% of the variance in the subjects' ratings. Reliabilities were assessed using Cronbach's coefficient alpha, and they turned out to be quite high (0.92 for the Attractiveness subscale, 0.88 for the Superiority subscale, and 0.76 for the Dynamism subscale), considering the original SEI was adjusted for this study. Reliabilities usually decrease as one goes from the first factor to the last: the alpha is always the highest on the first factor and decreases on the remaining factors (Bob Fountain, personal communication, March, 1995). Another reason why the alpha is smaller for the Dynamism factor is that there are fewer items on this factor (N=5).

The shaded boxes in Table 1 contain those items that after the factor analysis, did not load onto the same scales that they did in the original study by Zahn & Hopper (1985). The three items were strong/weak, which this researcher had expected to load on the Dynamism subscale, poor/rich, which originally loaded on the Superiority subscale in Zahn & Hopper's 1985 study, and confident/unsure, which was expected to load on the Dynamism subscale instead. This was disturbing because it pointed towards some inconsistency in the factor structure. However, Zahn & Hopper (1985) obtained similar results when they analyzed two subsamples from their two data collection sites. The Attractiveness subscale remained quite stable, but there was shifting within the Superiority and Dynamism subscales. Zahn and Hopper (1985) believe shifting occurs because of the contexts used in the speech samples or the rater concerns, which they suggest means that the SEI is sensitive to both the nature of what is being rated and who is doing the rating (p. 120). However, this "drift" in the Superiority and Dynamism subscales is problematic, as it suggests that these two factors are susceptible to randomness. It points to the need for caution when making interpretations from these two subscales, as they seem to be weaker than the Attractiveness subscale.

In the current investigation, the items making up the Dynamism and Superiority subscales all loaded on a type of a presentation skill factor that accounted for 18.6% of the variance in the subjects' ratings, while the items making up the Attractiveness subscale accounted for 41.9% of the variance in the subjects' ratings. In order to get a general idea of the value of variable-factor correlations, Comrey (1973) states that an orthogonal factor loading of .63 with a percentage of variance of 40 would get a rating of "very good," as one could make more definite statements about the factor (table 10.1, p. 226). This would describe the Attractiveness subscale in this study. Orthogonal factor loadings of .45 with a percentage of variance of 20 would receive a rating of "fair," and one would need to be cautious about making any factor interpretations (Comrey, 1973, table 10.1, p. 226). This is how this researcher would probably describe the combined Superiority and Dynamism subscales in the current investigation..

Table 1

Results of Principal Axes Factor Analysis (Varimax Rotation)

Variable	Factor I (Attractiveness)	Factor II (Superiority)	Factor III (Dynamism)
1. Nice-Awful	.74		
2. Warm-Cold	.82		
3. Friendly-Unfriendly	.87		
4. Likable-Unlikable	.81		
5. Pleasant-Unpleasant	.80		
6. Kind-Unkind	.70		
7. Good natured-Hostile	.74		
8. Precise-Vague		.68	
9. Strong-Weak		.55	
10. Educated-Uneducated		.70	
11. Intelligent-Unintelligent		.75	
12. Clear-Unclear		.69	
13. Illiterate-Literate		.74	
14. Fluent-Disfluent		.70	
15. Confident-Unsure		.57	
16. Rich-Poor			.52
17. Aggressive-Unaggressive			.67
18. Active-Passive			.68
19. Talkative-Shy			.67
20. Enthusiastic-Hesitant			.64
Number of items	7	8	5
Eigenvalue	8.39	2.53	1.19
Percent of Variance Accounted for	41.9	12.6	6.0
Reliabilities	0.92	0.88	0.76

RELIABILITY AND VALIDITY OF THE SEI

Detailed procedures for the adaptation and use of this instrument were discussed in Chapter III and could be used to replicate this study, if one were so inclined, which means that this instrument has surface reliability. This instrument also has face validity in that it is an adaptation of one that has been in use since 1985. The effect of adding another item to the SEI is probably minimal. Zahn and Hopper (1985) state that "bipolar adjectives obtained from [interviews and ethnographic assessment of evaluators' needs] concerning the particular language situation or context might be profitably combined with items from a shortened version of the SEI" (p. 121). Finally, it possesses content validity: it was adapted after a pilot study in which the subjects' opinions of the 23-item form lead to certain items being deleted that were deemed irrelevant or unapplicable to the medical context.

The original versions, both the long and short forms, have been assessed for both predictive validity (Zahn, 1989) and construct validity (Zahn, 1990). In assessing the construct validity of the SEI, Zahn (1990) compared the SEI to two other constructs, credibility and interaction involvement, and found that the three subscales of the SEI showed convergent reliability because they were strongly correlated with relevant subscales (competence, character and dynamism) of the credibility measure and not correlated with the interactional involvement scale.. In assessing the predictive validity of the superiority subscale of the SEI, Zahn (1989) compared the ratings of certain types of speakers, predicting that "adult standard speakers will be rated significantly higher on superiority than children who are nonstandard speakers" (p. 54). The items on the superiority subscale are associated with literacy, education and accomplishment. The adults were rated more highly than the children, who seemed to have two things working against them, their age and their nonstandard speech. However, the nonstandard speaking children were rated as significantly more dynamic than the standard speaking adults. Zahn believed that the explanation for this was due to the children communicating in a more animated, storytelling mode (p.57).

Although it was not the purpose of this study to see if the slightly adapted SEI this researcher used also had predictive and construct validity, this form of the SEI is valid in that it resembles the original forms of the SEI, especially the 22-item one. All of the items on the SEI used in this study have been used in other language attitude studies (e.g., Dreger, 1991; de la Zerda & Hopper, 1979; Gallois & Callan, 1981; Zahn & Hopper, 1985).

RESEARCH RESULTS

Pronunciation and Medical Competency

This hypothesis stated there is a significant positive relationship between a physician's pronunciation and a nurse's perceptions of his medical competency, as measured by the three dimensions (Superiority, Attractiveness, and Dynamism) of the SEI. In scoring the SEI, the more positive item on each continuum was always given a score of seven, while the most negative item was given a score of one. The overall scores from nurses at all three hospitals using the variables physician tape resulted in the native English speaking physician's tape (from hereon referred to as English tape), receiving a total mean score of 210.80, the native Farsi speaking physician's tape (from hereon referred to as Farsi tape), receiving a total mean score of 201.98, and the native Japanese speaking physician's tape (from hereon referred to as Japanese tape), receiving a total mean score of 193.63. These were the averages of the nurses' total scores for each tape. Each tape consisted for 40 scales and these were added up for each person and that resulted in the average of the scores. Table 2 summarizes the overall descriptive statistics for this hypothesis.

Table 2

Overall Descriptive Statistics

Variable	N	Mean	SD	Minimum	Maximum
English Tape	156	210.80	26.76	147.00	263.00
Farsi Tape	156	201.98	30.04	.00	266.00
Japanese Tape	156	193.63	26.16	100.00	266.00

These descriptive statistics were also calculated hospital by hospital to ascertain whether the nurses in the different hospitals rated the physicians similarly. Table 3, on page 78, summarizes the hospital by hospital descriptive statistics for this hypothesis.

Table 3

Hospital by Hospital Descriptive Statistics

Hospital A Variable	N	Mean	SD	Minimum	Maximum
English Tape	82	207.49	25.40	147.00	263.00
Farsi Tape	82	200.91	31.42	.00	257.00
Japanese Tape	82	196.49	25.18	102.00	255.00
Hospital B Variable	N	Mean	SD	Minimum	Maximum
English Tape	39	215.74	27.30	164.00	263.00
Farsi Tape	39	206.97	28.40	135.00	259.00
Japanese Tape	39	192.87	24.56	146.00	266.00
Hospital C Variable	N	Mean	SD	Minimum	Maximum
English Tape	35	213.06	28.92	157.00	259.00
Farsi Tape	35	198.91	28.65	147.00	266.00
Japanese Tape	35	187.80	29.68	100.00	236.00

Regardless of hospital, the nurses consistently rated the physicians in the following order: the native English speaking physician was rated highest, the native Farsi speaking physician was rated slightly lower, and the native Japanese physician was rated the lowest of the three, justifying the researcher's expectation that the stronger one's accent is, the lower the ratings on the SEI.

Native/Nonnativeness and the SEI

H1 There is a significant positive relationship between a native English speaking physician's speech and the ratings he receives on the SEI.

H2 There is a significant positive relationship between a nonnative English speaking physician's speech and the ratings he receives on the SEI.

These two hypotheses are partially supported by the overall descriptive statistics displayed in Tables 2 and 3. Partially supported because when one looks at how the physicians were rated by the nurses floor by floor (see Appendix M), it is clear that the nurses did not always give the native English speaking physician the highest rating. For example, three floors at Hospital A (N = 35) and one floor at Hospital B (N=9) rated the native Farsi speaking physician the highest and one floor at Hospital A (N=2) rated the native Japanese speaking physician the highest. In these situations, the native English speaking physician was then put in second place. Several alternative explanations may account for this. First, this could have been due to either subject expectancy or less likely, the Hawthorne effect, where the subject is so pleased to be in a study that it affects his/her answers (Richards, Platt, Weber, 1985). Second, it could have been something the native English speaking physician said: some of the nurses did not believe that his verbal order, "Please bolus Mr. Allen with 1 liter of lactated ringers," was what the patient immediately needed. Third, his rate of speech, which was very fast, could have negatively influenced the nurses, if the nurses were more concerned about benevolence than competence. In a study by Brown (1980), speakers who spoke quickly received lower ratings on benevolence adjectives, such as likable, and higher ratings on competence adjectives, such as confident. Because the researcher obtained the scripts for the formal contexts from fifth- and sixth-year residents, she did not question the accuracy of the content or how real the content seemed. Also, the nurses in the pilot study did not raise any questions as to the content of the formal contexts. This was perhaps due to the Halo effect (Richards, Platt & Weber, 1985), as the nurses in the pilot study were ones this researcher has worked with for many years. This researcher was rather surprised at how closely the nurses paid attention to the content; they often said, "Wait, I didn't get that, could you play it again?" Because of this, a few nurses in the actual study questioned the completeness of the scripts of the formal contexts, particularly the formal context the native Farsi speaking physician read, as a few believed that the patient history (see Appendix B) was not complete enough to warrant giving the patient four units of blood. They quite reasonably stated that they would need to know the patient's hematocrit first. This point caused them to rate this physician lower in the formal context, at least that is what they told the researcher.

These nurses seemed to assume that the verbal order was the first order the physician would be giving them; thus, they were treating the two parts of the formal context as discourse, something that this researcher had not planned on. This would, of course, affect the way they perceived the physicians.

Order Effect. The sequence in which the nurses listened to the tapes also made a difference in how the nurses rated the physicians, which the researcher rather expected, based on experience: people's evaluations are often colored by what has just occurred. This researcher tried to play the tapes in a random order for the most part, changing the basis of comparison which the subjects might use in evaluating a particular physician's speech. Although after collecting data at Hospital A, she found that nurses tended to guess what the study was about when the Japanese tape was played in the inital position.

The researcher wanted to see whether the tape scores were dependent on the order in which the tapes were played. There were six sequences: the English tape-Japanese tape-Farsi tape was designated as sequence 1; the English tape-Farsi tape-Japanese tape was designated as sequence 2; the Japanese tape-English tape-Farsi tape was designated as sequence 3; the Japanese tape-Farsi tape-English tape was designated as sequence 4; the Farsi tape-English tape-Japanese tape was designated as sequence 5; and the Farsi tape-Japanese tape-English tape was designated as sequence 6.

An analysis of variance was first performed on each tape, followed by a tukey-HSD test, which is a test of multiple comparisons (see Appendix N for the complete analysis). For the English tape, the p-value was highly significant: .0018 at the .05 level. This was followed by a tukey test which found two places where the sequences were significantly different. Sequence 5 was significantly different than the two other sequences which received the highest means, sequence 2 and sequence 6. All six sequences were not significantly different, just these three. The English tape was rated the highest when it was heard either in the initial position or in the final position. It was rated the lowest when it was heard in the medial position, following the Farsi tape. One possible explanation could be the nurses' negative reaction to the Farsi tape carrying over to also affect their reaction to the English tape.

For the Japanese tape, the p-value was not that significant: .0431 at the .05 level, which is borderline. After the tukey test, the only place where there was a significant difference was between sequence 1 (English-Farsi-Japanese), which had the lowest mean, and sequence 4 (Japanese-Farsi-English), which had the highest mean out of the six sequences. This physician was rated the lowest when he immediately followed the native English speaking physician and the highest when his tape was heard first.

The p-value for the Farsi tape was .0368 at the .05 level, which was significant. However, when the tukey test for multiple comparisons was run, it failed to find any significant differences between groups after multiple tries. This result occurred most likely because of the researcher's unequal sample sizes. Perhaps the two sequences that were the furthest apart for this tape were very unequal in size, which would make it impossible to find a significant difference.

As some of the tape scores did depend on the order in which the tapes were presented, one has to decide whether this is a positive or negative result. The authors of past studies have not agreed on this. Huygens and Vaughan (1983) state that "linguistic judgments of others in a real-life context involve exposure to many speech styles, whether simultaneously present or remembered over time" (p.210). Their point is that the order effect mirrors reality so that one automatically should not conclude that this is negative when it then also occurs in a study. Wible and Hui (1985) take a dimmer view of the order effect, stating that it "may weaken conclusions drawn from studies using a within-sample design in which listeners rate several speech samples" (p.218). The order effect could be due to the artifacts of a study, and could thus act as a warning sign to researchers. However, this researcher agrees with Huygens and Vaughan on this matter, because their opinion seems to reflect how differing speech styles actually affect listeners.

Items Used to Describe the Physicians. Another way to see how the nurses perceived each physician in both the formal and informal contexts is to look at the five highest and lowest ranking items (the number five was chosen arbitrarily) for each physician (see also Appendix O for these items and their mean scores). This information was obtained by ranking the mean scores of each item by tape. The native English speaking physician was most positively rated on four items (nice, pleasant, friendly, good natured) from the Attractiveness subscale, which involves aesthetic-solidarity dimensions and on one item (literate) from the Superiority subscale, which reflects the listener's association of a speech style with the language used by educated, prestigious members of society. All five of these items occurred in the informal context, which may mean that the nurses felt solidarity towards him, that this physician was similar to how they perceived themselves. From listening to his informal context the nurses could tell this physician definitely knew how to emote. He, like the other two physicians in this study, has been asked this question or a variation of it before, most likely during the interviews that are needed to get admitted into a residency program.

The native English speaking physician was rated lowest on five items (aggressive - once in the formal context and again in the informal context, enthusiastic, rich, and talkative) from the Dynamism subscale, which involves activity or the vigor of the speaker's language style. The item, rich, loaded on the Dynamism subscale for this study rather than on the Superiority subscale. The reason for this could be because the nurses may have perceived that someone who was not a vigorous speaker would not be as successful monetarily. Four of these low-rated items occurred in the formal context, which may have meant that the nurses did not perceive this physician as being a very forceful or powerful physician in this context.

The native Japanese speaking physician was rated most highly on five items (literate - in both the informal and formal context, educated - in both the informal and formal context, and intelligent) from the Superiority subscale. The nurses obviously perceived this physician's speech, even though it is accented, as belonging to someone who is intelligent enough to get where he is today. This physician was rated lowest on two items from the Attractiveness subscale (friendly and warm) and three items from the Dynamism subscale (talkative, aggressive and enthusiastic). All five of these items came from the formal context, in which he was reading a patient history from a specialty with which he was unfamiliar. This unfamiliarity resulted in many hesitations in all three readings of this context. Hesitations and false starts make a speaker's voice sound less vigorous, which was reflected in the low mean scores for those three items on the Dynamism subscale. Accented speech, where the accent is different from the subject's, is often perceived as being less friendly and warm (e.g., the studies of Gallois & Callan, 1981; Lambert et al., 1960; Ryan & Sebastian, 1980). Because the formal context was the more important one or the one the nurses seemed to pay closer attention to, this researcher believes that the nurses rated him more negatively in this context. As this was not his specialty, this is an artifact of the study. Ryan (1983) states that "the more important actual communication is in a given situation, the more negative affect will be generated" (p. 158) as the listener's must try not to focus on the speaker's accent in order to understand the message.

The five items that were the most favorable for the native Farsi speaking physician were all from the Superiority subscale (clear, literate, precise, fluent and intelligent) and all occurred in the formal context. This physician did a very good reading, actually the best of all three of the physicians, and his speech style in this context was one that definitely would be associated with an educated, confident person. This physician was rated the lowest on two items from the Attractiveness subscale (friendly and warm) and three items from the Dynamism subscale (talkative, aggressive, and enthusiastic). The items friendly and warm occurred in the formal context, while the other three items occurred in the informal context, which seemed to have been more difficult for this physician as it was impromptu. His three answers for this context all tended to be full of hesitations and false starts, which were reflected in the low rankings of the three items from the Dynamism subscale.

Formal/Informal Contexts

H1 There is a significant positive relationship between the context (a tense, formal one versus a relaxed, informal one) the physician is speaking in and the ratings he receives on the SEI.

This hypothesis was tested by first computing a formal score and informal score and then performing a matched pairs t-test. The formal score was the sum of the scores for the first 20 items for each of the three physicians. The informal score was the sum of the scores for the second 20 items for each of the three physicians. So then each of the physicians had a formal score and an informal one. The matched pairs t-test was performed to look for a significant difference between the formal and informal scores. The p-value was very highly significant: .000. The results of the t-test are shown in Table 4.

Table 4

Formal/Informal Contexts: Matched Pairs T-test Results

Variables	Number of Pairs	Correlation	2-tail Sig.	Mean	SD	SE of Mean
Formal				296.58	32.07	2.57
Informal	156	.790	.000	309.83	38.89	3.11

The results of this t-test confirm the researcher's expectation that there is a significant positive relationship between the context and the rating the physician received on the SEI. All three physicians received a significantly higher total informal score, indicating that it might be worthwhile to try to increase feelings of solidarity among coworkers. One nurse remarked that it would be nice to learn something like this (a physician's future plans) about every physician that rotates through a service, as it would make everyday work relationships a little more comfortable.

Year of Graduation From Nursing School

H1 A There is a significant positive relationship between the number of years (less than 10 years) it has been since a nurse graduated from nursing school and the way she views a nonnative English speaking physician.

HI B There is a significant positive relationship between the number of years (over 10 years) it has been since a nurse graduated from nursing school and the way she views a nonnative English speaking physician.

The researcher was interested in finding out if nurses who have been in nursing less than ten years were more likely to be tolerant of nonnative speakers, because perhaps they had had some classes in nursing school that would have made them aware of different cultures. These hypotheses were tested by running correlation coefficients between tape results and the second demographic question "How many years have you been a nurse?". As a check, the correlation coefficient test was also performed on the native English speaking physician data. As anticipated, there was no correlation between the number of years a nurse has been in nursing and the way she views this physician. The correlation was .1064, which is very low and the p-value, .186, was not significant.

However, the researcher got unexpected results when the data for the nonnative English speaking physicians was analyzed. For the native Japanese speaking physician, the correlation was extremely small, .0038, and the p-value was a very insignificant .963. For the native Farsi speaking physician, the correlation was again extremely small .0462 and the p-value was .567. These results surprised the researcher as she had expected to see a difference between more recent graduates from nursing school and those who have been in the field for more than 10 to 15 years. However, if one recalls the results of the very small informal survey described in Chapter Three, only three of the nurses surveyed (N=19) had had any kind of classes on transcultural nursing and those nurses graduated in 1992 or thereafter. It is possible that the majority of the nurses in this study have obtained their intercultural "training," the hard way, which sometimes leaves one with a mistaken impression of another culture.

Overseas Experience

H1 There is a significant positive relationship between a nurse who has traveled or worked overseas and the way she perceives a nonnative English speaking physician.

This hypothesis was tested by performing a two (independent) sample t-test, as the two demographic questions that dealt with this hypothesis were yes/no questions. The demographic questions were compared separately with the variables, which were the three physicians. For the first demographic question "Have you ever traveled overseas?", 94 nurses answered "yes," and 62 nurses answered "no." The p-values for all three physicians were all statistically insignificant, but because this hypothesis only involves the nonnative physicians, only their results will be discussed here. In regards to the native Japanese speaking physician (the one of the variables here), although the mean for the nurses who answered "no" to this question (193.56) was very close to the mean for the nurses who answered "yes" (193.68), the p-value was statistically insignificant: .978. In the t-test where the native Farsi speaking physician was the variable, the mean for the nurses who answered "no" (204.58) to this question was farther apart from the mean for the nurses who answered "yes" (200.27), but again the p-value, .382, was statistically insignificant. So, this demographic question appears to not have any affect on how the nurses rated the nonnative English speaking physicians. One explanation for this may be that the majority of the nurses traveling abroad were gone for very short durations (the average time abroad was two weeks), which is not long enough to be affected by a different culture.

For the second demographic question "Have you ever worked overseas?", 146 nurses answered "no," while 10 nurses answered "yes." Again, the results of the native English speaking physician will not be discussed here as the hypothesis only deals with the two nonnative English speaking physicians. For the t-test where the native Japanese speaking physician was the variable, the mean for the nurses who answered "no" was 192.54, while the mean for those who answered "yes" was 222.80. This time the p-value was just barely significant, .046. This might be due to the fact that those who had worked overseas knew from first-hand experience what it was like to try to communicate in another language and may have even perceived their accent in their second language as being just as strong as this physician's accent in English, if not stronger.

For the t-test where the native Farsi speaking physician was the variable, the mean for the nurses who answered "no" was 201.64 and the mean for the nurses who answered "yes" was 207.00. The p-value, .587, was statistically insignificant, which means that having worked overseas made no difference to how these nurses rated the native Farsi speaking physician. This is not completely surprising as many of the nurses could not detect this physician's accent (his accent was perceived by the nurses as being very slight, so it was often not detected until the researcher told them the ethnic origin of the physicians at the end of the study). Therefore, the question that dealt with whether the nurses had worked overseas, only had an effect on how the nurses rated the native Japanese speaking physician.

COMMUNICATING AND WORKING WITH OTHER CULTURES

Two of the demographic questions asked the nurses to agree or disagree with statements regarding communicating with and working with other cultures. These two questions were in the format of a 5-point Likert scale, with the choice of answers ranging from strongly agree to strongly disagree (see Appendix K, demographic questions numbers five and six). The statements were "I am comfortable communicating with people from other cultures" and "I work well with people from other cultures." The researcher wanted to explore the nurses' perceptions of their own comfort level, to see how these feelings compared to their ratings of the two nonnative English speaking physicians in the study. A third question, "Do you consider yourself fluent (or fully conversant) in any other language(s) beside English?" was a more indirect way of looking at the nurses' interest in and exposure to other cultures through second language learning.

The results of each question were simply tallied for the 156 nurses in the study. For the first statement, "I am comfortable communicating with people from other cultures," 34 nurses strongly agreed and 91 nurses agreed with this statement, while 13 nurses disagreed and 2 nurses strongly disagreed (16 nurses chose "not sure" as their answer). The results of the second statement, "I work well with people from other cultures," were as follows: 37 nurses strongly agreed and 98 nurses agreed with this statement, while 4 nurses disagreed and 1 nurse strongly disagreed (16 nurses chose "not sure" as their answer). As one nurse was attempting to answer this question, she made the distinction to the researcher, that she would answer this question using "agree" if she was referring to a physician, but would choose "disagree" if she were referring to a CNA or a housekeeper (at the particular hospital she works at it seemed to this researcher as though a great majority of the CNAs and housekeepers were from another culture). The results of the third question were also simply tallied. Eight nurses who were native speakers of English said that they were fluent or fully conversant in another language. Many of the nurses sampled know some Spanish (either words or phrases, sometimes more) from treating Hispanic patients or taking a Spanish class, but the wording of this question prevented them from being able to acknowledge that they too were second language learners.

Although some nurses really may have been comfortable communicating with or working with those from other cultures, if the majority of the nurses truly felt this way, then one would have expected them to have evaluated the nonnative physicians as positively as the native English speaking physician or for there to have been less of a difference between the total mean scores. Perhaps even though the majority of these nurses would never see this researcher again, they still may have hesitated to be completely honest. It is also not politically correct to admit that one is not comfortable either communicating with or working with people from different cultures, because it would be similar to admitting to being prejudiced. The most probable reason that the answers to these two questions were different from the negative ratings given to the two nonnative English speaking physician is that the ratings were closer to the way the nurses really felt towards nonnative English speaking physicians. As Edwards (1982) states, "people's reactions to language varieties reveal much of their perception of the speakers of these varieties" (p. 20).

DIFFERENCES BETWEEN HOSPITALS

Another question this researcher was interested in finding out the answer to was whether there was a statistical difference in how the nurses at Hospital A rated the physicians versus the nurses at Hospital B and Hospital C. One way to look at this was to see if any of the three individual tape scores significantly differed across hospitals. To answer this, a one-way analysis of variance (ANOVA) was performed. For the variable English tape, the p-value was .2436, which was insignificant, indicating that how the nurses rated the native English speaking physician did not vary significantly across the three hospitals. For the variable Japanese tape, the p-value was .2544, which also insignificant. So again, how the nurses rated the native Japanese speaking physician did not differ from hospital to hospital. Finally, for the variable Farsi tape, the p-value was .4646, which was also statistically insignificant. Again, the nurses did not differ across the three hospitals in how they rated this physician.

Another way to answer this question is to look at the total scores of all three physician's tapes and see whether these differ across the three hospitals. In order to do this, a multivariate test (MANOVA) was performed. Three different multivariate tests were done (Pillais, Hotellings and Wilks) but their p-values were all very similar (.077, .074 and .075, respectively). These were borderline, but statistically insignificant at the .05 level.

The researcher was fairly surprised by these results as she had always thought that the nurses who work in Hospital A were very different from nurses who work in either Hospital B or C, in terms of how they view physicians and the degree of formality their working relationship with the physicians possesses. Perhaps because these are all urban area hospitals and because the physicians in the residency program at Hospital A all rotate to Hospital B and C at some point (often more than once) during their residency, the nurses did not respond to each physician in this study as differently as this researcher had originally supposed. If this researcher had been able to include one or two smaller rural hospitals, which may not have as many (if any) nonnative English speaking physicians, then there might have been an observable difference among hospitals.

SUMMARY

This study has demonstrated that it is possible to use the SEI (albeit in a slightly modified form), in a new setting, the hospital, with a different type of subjects, medical-surgical nurses, who used the SEI to rate speakers in two contexts (formal and informal). The results and implications of this study will be discussed further in Chapter Five.

CHAPTER V

DISCUSSION

This study examined medical-surgical nurses' perceptions of the medical competence of nonnative English speaking physicians. The study used a 3x2x2 design, in which there were three independent variables: country of origin, context, and type of English spoken. The nurses' perceptions were measured by the dependent variables located on the three dimensions (Superiority, Attractiveness, and Dynamism) of the Speech Evaluation Instrument (SEI) designed by Zahn & Hopper (1985). This study was the first language attitude study conducted in a hospital setting and the first study to have used medical-surgical nurses as subjects, rather than college students. This chapter discusses the significance of the findings, limitations of the study and recommendations for further research.

DISCUSSION OF SIGNIFICANT FINDINGS

As discussed in Chapter Two, ethnolinguistic identity refers to the criteria for group membership, which are often connected to using linguistic distinctiveness strategies when speaking to a member of another group. This study examined two different kinds of groups: professional (nurses and physicians) and ethnic (American, Persian, and Japanese). Ethnolinguistic identity relates to the language attitudes of group members and the context within which these attitudes operate. Ryan & Giles (1982) believe that the language attitudes of group members depend on the situation in which the language is used. In this study, two contexts were used to examine the medical-surgical nurses' language attitudes and to see if these attitudes changed, depending on the context in which these nurses listened. Nurses who made some negative comments about a physician, such as "Where did you get this guy," while filling out the SEI for the formal context, generally tended to make more positive ones, such as "Oh, he sounds pretty interesting," while filling out the SEI for the informal context on the same physician. The inclusion of the informal context, which was rated significantly higher for all three physicians, was apparently very appealing to the majority of the nurses participating in this study. This was in keeping with the findings of other language attitude studies in which context made a difference in how the subjects rated the speakers (e.g., Ryan & Bulik, 1982; Ryan & Carranza, 1975).

This researcher felt that some nurses were very much prepared to give these physicians a negative rating, simply because they were physicians, and therefore not part of the nurses' ingroup. This was reflected in such questions as "Is 'jerk'(or more unmentionable adjectives) one of the items on this questionnaire?" After the nurses finished listening to all three tapes, some also commented "Well, all of these guys sounded pretty nice; you should have picked some meaner ones." Luckily, these nurses were in the minority, but it did make this researcher wonder which group was being rated, the group of "physician" or "the nonnative English speaker who happens to be a physician."

Another significant finding of this study that supported the findings of other language attitude studies (e.g., Anisfeld et al., 1962; Lambert et al., 1960; Gallois &

Callan, 1981; Giles, 1970) was that the nonnative English speaking physicians were rated lower (when looking at the combined 156 ratings from all nurses) than the native English speaking physician. The stronger the physician's accent, the lower he was rated. This was the researcher's expectation, even though many of the nurses did not think they would be guilty of using someone's accent or pronunciation to negatively evaluate him/her. Most of the nurses said something like, "I don't think that way; I deal with too many international doctors to think like that". This was also reflected in the degree the nurses agreed with the statement "I am comfortable communicating with people from other cultures" (demographic question number five on the questionnaire). Out of 156 nurses, 34 strongly agreed and 91 agreed with this statement, while only 13 nurses disagreed and two strongly disagreed (16 nurses were "not sure"). The demographic question that asked the nurses to agree or disagree with the statement "I work well with people from other cultures" received similar results: 37 nurses strongly agreed and 98 agreed with this statement, while 4 nurses disagreed and one strongly disagreed with this statement (again, 16 nurses were "not sure").

Although the majority of the nurses indicated that they were comfortable both communicating and working with those from other cultures, one wonders if this is indeed true. Are these nonnative English speaking physicians the ones the nurses call when there is something going on with one of their patients, or are they more likely to turn to another physician on the team? In this researcher's experience, if a nurse does not like the way a physician treats the patients or staff, she just waits for him/her to rotate to another floor, which, depending on whether the physician is an intern or a fifth year resident, would be every one to three months. Only when a physician is behaving in such a way that patient care is being seriously compromised, would a nurse (or a group of nurses) talk either to the department director or to the team's attending in an attempt to change the physician's behavior.

Because the native Farsi speaking physician's accent seemed very slight to the nurses (some of the nurses told the researcher that two of the tapes they heard were of American physicians), this researcher wondered whether it was the number of hesitations rather than his accent that caused him to be perceived less favorably than the native English speaking physician. According to Street and Hopper (1982), perceptions of paralanguage behaviors, such as hesitations, do have significant evaluative consequences (p. 181). These evaluations are usually negative; for example, the more hesitations in a speaker's message, the more negatively the listener will evaluate him/her, especially in terms of competence. However, the context in which the hesitations occurred for the native Farsi speaking physician was the more relaxed informal one, which according to Giles and Ryan (1982) is the context where listeners tend to put more emphasis on the Attractiveness/Solidarity dimension than the Competence/Status dimension, which means giving higher rating to the items that fall on the Attractiveness/Solidarity dimension. Because his overall informal score, like the other two physicians, was higher, this researcher believes that the nurses were responding to his accent.

Even though this researcher modified the SEI, it still basically performed as expected. One of the recommendations made by Zahn and Hopper (1985) concerned the introduction of new items to the SEI, as they had said it might be possible to add new items to the short form of the SEI. This researcher's analysis of the factor structure revealed shifting within two of the factor structures of the SEI, the Superiority and the Dynamism subscales, where three of the items simply did not load on the same subscales as they did in Zahn and Hopper's (1985) study. Apparently, Zahn and Hopper (1985) also experienced this variation in subscales. Thus, while the Attractiveness subscale is quite stable, the other two are not. This is quite a contrast from the reliabilities obtained for each of the subscales in this study (0.92 for the Attractiveness subscale, 0.88 for the Superiority subscale, and 0.76 for the Dynamism subscale), all of which were quite high. How can a scale achieve this level of reliability when it does not seem to be stable? Therefore, due to the instability of the Superiority and Dynamism subscales, it perhaps would be best not to over-generalize from them as perhaps these two subscales are not the correct ones.

In this investigation, the Superiority and Dynamism subscales combined accounted for 18.6% of the variance in the ratings, while the Attractiveness subscale accounted for 41.9%. Does this mean that the nurses were evaluating the physicians more on an interpersonal, relational dimension, i.e., how warm/cold or friendly/unfriendly they seemed? It appears this could be the case. One explanation for this could come from nursing education, where nursing students are taught the importance of good interpersonal communication skills and to look at the "whole person", beyond just the diagnosis that brought the patient to the hospital. Reed and Procter (1993) believe that the ideological positions of holistic (which addresses psycho-social aspects of living) and individualized care (which recognizes the uniqueness of each patient) nursing has developed originated "from an increased awareness that depersonalized task allocation potentially created a great deal of distress in the recipients of care" (p. 18). These two approaches to care have helped nurses treat their patients as people rather than as diagnoses.

Another possible explanation for this result is related to the gender of the nurses. All of the nurses who participated in this study were female; perhaps females pay more attention to the qualities that load on the Attractiveness subscale, although in a study conducted by Gallois and Callan (1981), no significance difference was found in how male and female subjects rated speakers from six national groups. It seems, however, that when most language attitude studies mention gender, these studies are concerned with the gender of the speakers and how this affects the subjects (e.g., Abrams and Hogg, 1987), rather than how the gender of the subjects affects their evaluations of the speakers. This researcher's belief that gender does make a difference in how subjects evaluate speakers, is supported by Giles (1970) who stated, "evaluative reactions to spoken language are concomitantly dependent on a complex matrix of sender-receiver attributes including age, sex and social class" (p.211).

When reviewing the results of the statistical analysis, the researcher found three areas where the results were definitely not what she had expected. These were 1) whether there was a difference in how the nurses at all three hospitals rated the physicians; 2) whether the length of time a nurse had been in nursing affected her ratings of the nonnative physicians; and 3) whether having had overseas experience affected a nurse's ratings of the nonnative physicians. These expectations were not based on previous research; they were the researcher's personal expectations, which were partially based on extensive hospital work experience (ten years). These expectations were also partially based on the great change and personal growth experienced by this researcher during her extended stay (1 year) abroad as an exchange student (in contrast to the nurses in this study, whose average time abroad was two weeks).

The nurses who work at Hospitals A, B and C seemed different from each other, especially in terms of how much more busy the nurses at Hospital A were when compared to the nurses at Hospitals B and C. This may be partially due to staffing (the nurse:patient ratio), the type of patients being cared for (how serious their illnesses are), or from the way the floor is staffed (the number of CNAs per nurse or whether or not there is a secretary for that shift). These all have an effect on how the nurse feels about the institution s/he works for or even nursing itself. It could also have an effect on how the nurses relate with physicians and other co-workers. Therefore, this researcher was interested to see if this was so. However, the nurses at these three hospitals did not differ in how they rated the three physicians on the SEI: the native English speaking physician still received the highest mean rating, followed by the native Farsi speaking physician and the native Japanese speaking physician. The location of the hospitals did not matter, although all three of these hospitals are urban ones. Perhaps if a few rural hospitals had been included in this study, there would have been a significant difference.

The number of years a nurse had spent in nursing had no effect on her ratings of the nonnative English speaking physicians, which was a surprise. The researcher had supposed that if a nurse had been a more recent graduate of nursing school, she would have had a class in either transcultural nursing or intercultural communication, and having been exposed to those kinds of concepts, might be more tolerant of physicians from other cultures. However, when the researcher brought this idea up to the nurses in this study (after they had finished listening to the tapes and rating the physicians), many of them disagreed with this idea, saying that a nurse learns more from experience than s/he does from a class or two in nursing school. The statistical analysis indicated that neither the nurses newer to nursing or the more experienced nurses were more likely to rate the nonnative physicians more positively on the SEI. Perhaps this indicates a basic lack of awareness of cultural awareness, even now when there are a large number of organizations making diversity training available to their employees.

Finally, whether a nurse had had overseas experience, gained by either traveling or working overseas, had no affect on how she rated the nonnative English speaking physicians with one exception. This exception occurred when the nurse had worked overseas (N=10) and it only affected how she rated the tape of the native Japanese speaking physician, who had the strongest accent. This may have been because having been immersed in a different culture, these nurses knew how it was to be the ones who spoke the language with an accent and so they could empathize with this physician. Traveling overseas had no effect on how the nurses rated the nonnative English speaking physicians and the most likely reason for this is that many of the nurses had only traveled for very short durations, the average time length was two weeks. This is simply not enough time to be touched by a culture, to experience any change in attitudes one might have about the people in a particular culture. This phase of cultural adjustment (usually the first two to three weeks in a new culture) is often called the "honeymoon" phase, and it lasts only as long as things seem new and exciting. Often one is only noticing the similarities between one's native culture and the host culture during this phase (Intercultural Communication, 1982), which, after many short trips abroad, could lead one to begin to doubt the very existence of cultural differences.

LIMITATIONS OF STUDY

One limitation to this study is that it is not generalizable to all nurses, especially those who work in specialty areas, such as psychiatry or intensive care, or who are male. Nor are the results generalizable to all hospitals or residency programs in the United States as there may be some that do not have any International Medical Graduates (IMGs) participating in their residency program, as there appear to be a greater number of IMGs east of the Rocky Mountains. For example, according to Gayed (1991), the states that had the largest numbers of IMGs matched to internal residency positions in 1987-1989 were New York, Illinois, New Jersey, Maryland, Michigan, Ohio, Pennsylvania, Missouri and the District of Columbia (p. 699).

Other limitations of this study were due to some of the artifacts of the study, which may have affected the results. One of the artifacts had to do with the formal context. In the actual study, the nurses perceived the content of the formal contexts as discourse. For the most part, these nurses thought that the verbal order given by the physician after the patient history typified what a nurse would usually hear, although this was neither the fifth/sixth year residents' intent when the researcher was gathering these contexts nor, certainly, this researcher's intent. This made the nurses more critical of the physician who happened to be reading the formal context in question (the two formal contexts criticized were the ones read by the native English speaking physician and the native Farsi speaking physician), which could have negatively affected their evaluations of the physician. Although these formal contexts were obtained from experienced, native English speaking residents, this researcher could have had some other native English speaking fifth or sixth year residents critique the formal contexts as a validity check, to make sure they did not seem like discourse.

Another artifact that may have influenced the nurses' evaluations is how the physicians answered the question "What will you do after you finish your residency?" The directions this researcher gave the physicians instructed them to answer using exactly five sentences, which may have inhibited them somewhat, particularly in the case of the native Japanese speaking physician, who very conscientiously gave this researcher five brief sentences. Perhaps a reason why he was so brief in the informal context may have had to do with his cultural background, as he was from a culture where people typically do not self-disclose to complete strangers, which is what both the researcher and the subjects in this study were to him. Although the nurses rated him higher for this context than they did in the formal context, he still was rated the lowest of all three physicians in the study. This direction was overly constraining and most likely did not make the physicians feel relaxed and informal. What this researcher could have done instead was instruct the physicians to "talk briefly," and then use the first two minutes or so of their answer for the study.

A third artifact of this study had to do with the native Japanese speaking physician being at more of a disadvantage as a speaker than the other two physicians. For the formal context he was not reading his specialty, unlike the other two physicians. This contributed to the number of hesitancies found in all of his readings of this context, which in turn, may have been the reason why the nurses rated him the lowest. He was different from the other physicians in two other ways: he was older and he had already practiced as a surgeon in Japan.

A final artifact of this study has to do with the order effect, where the sequence in which the nurses heard the physicians speak made a difference in how they rated them (see Appendix N for the complete analysis). Some authors (e.g., Wible & Hui, 1985) believe that whenever the sequence of speakers affect the subjects' ratings, it weakens the findings from studies where subjects rate several speakers. However, this researcher agrees with Hugyens and Vaughan (1983), that the order effect mirrors reality and thus, does not necessarily weaken any of the resulting conclusions drawn from such studies.

This study did not consider how background noise affected the nurses' evaluations of the three physicians. In a study done by Brown (1980), there was a tendency for the subjects listening to accented speech in a noisy setting exaggerating their negative feelings associated with listening to unfamiliar speech. Quite a few of these nurses participating in this study did so under less-than-ideal conditions, such as in a noisy staff lounge during lunch or even at the nurses' station. Also not taken into consideration were nurse characteristics (such as patient load or her most recent interaction with a physician), and how these types of things might have affected how she rated the physicians.

This study also did not look at how status affects the subjects' evaluations, for example, would nurses rate the same speaker less favorably if they believed him to be an orderly rather than a physician? This question is beyond the scope of this study, but along with everything else mentioned in this section, future research is recommended.

SUGGESTIONS FOR FURTHER RESEARCH

Design of the Study

What this study accomplished was a test of the instrument, the SEI, in the hospital setting, using medical-surgical nurses as subjects. Although this study does have its flaws (problems with the formal context being perceived as discourse, for example), this researcher believed it supported the findings of other language attitude studies. And while this researcher believes that this study has a higher external validity than a study that uses nonrandom or convenience sampling to obtain its subjects, replication is definitely called for to increase the generalizability of this study.

One aspect to explore in future studies concerns content. Was it the content subjects were primarily evaluating in this study or was it the physicians' speech? Were positive responses due to a lack of accent or due to the nurses' agreement with what the physician said in either his treatment of the patient (found in the verbal order) or his future goals? If the nurses were more concerned with the content of both the formal and informal contexts, then this would contradict what Edwards (1982) has stated about language attitude studies: "it is not the speech per se which is evaluated, but rather the speaker" (p. 22). An idea which might get the nurses to focus more on a physician's speech would be to pair native and nonnative English speaking physicians with native English speaking nurses and tape them while they are talking about a patient as Street and Hopper (1982) believe that "listener evaluations of language/dialect/accent often depend on the manner in which a speaker adjusts his or her speech patterns within a given interaction" (p. 179).

Further studies should include different types of nurses, such as intensive care nurses, to see if they would also rate nonnative English speaking physicians more negatively. Also, as mentioned previously, rural hospitals should be included in future studies to see if these nurses would rate nonnative English speaking physicians the same as the nurses working in urban hospitals.

Education and Training of English as a Second/Foreign Language Instructors

Many ESL instructors and, perhaps to a lesser extent, EFL instructors are often uncomfortable with teaching English for Specific Purposes (ESP). This is reflected in the number of TESOL members who had their primary membership in the ESP interest section in 1994: 560 members as compared to the membership of more "traditional" interest sections, such as English as a Foreign Language, with 2,592 members, or Higher Education, with 1,460 members (Bayley, 1995). ESP can include almost anything, from English for Academic Purposes (EAP) to English for Medical Purposes (EMP) or English for Science and Technology (EST). Few ESL/EFL instructors leave their teacher training programs feeling competent to teach an ESP course, especially if it has anything to do with science. Teacher training programs should offer a class to familiarize students with the many different kinds of ESP and to discuss approaches to teaching ESP and the role of the ESP instructor, so that future ESL/EFL instructors would feel both more confident and competent when presented with the opportunity or the need to teach such a course

Developing the skills to teach pronunciation may also not be given adequate time in teacher training programs. This can lead to instructors also devoting less than adequate time to pronunciation in the second language classroom. Therefore, the teaching of pronunciation should be emphasized more in teacher training programs and the results of language attitude studies shared with TESOL students to highlight what can happen to nonnative speakers when their pronunciation problems are not given enough attention. In 1970, Giles warned that "teachers are not sufficiently aware of the social hazards in accepting accented-speech from their pupils at all times and are thus not motivated to remedy the situation" (p. 226). Since Giles' statement twenty-five years ago, one would hope that the majority of ESL instructors have become more knowledgeable about the important role their students' pronunciation plays in how they are evaluated by native speakers outside the ESL/EFL classroom.

Preparing nonnative speakers for the world outside the second language classroom

There are two major implications for those who teach English as a Second or Foreign Language (ESL/EFL). First, if a speaker's pronunciation is important to native speakers, if poor pronunciation causes them to negatively evaluate the speaker, then perhaps more pronunciation work and perhaps accent reduction exercises are called for in the second/foreign language classroom. Instructors need to inform students that people outside of the classroom (or in international business settings when teaching overseas), will be judging them differently from how they are judged in the classroom. The importance of empowering one's students is supported by Gumperz and Cook-Gumperz (1982) who state, "the ability to manage or adapt to diverse communicative situations has become essential and the ability to interact with people with whom one has no personal acquaintance is crucial to acquiring even a small measure of personal and social control" (p. 4). Second, if a physician's pronunciation or speech style causes nurses, not to mention patients, to evaluate him/her negatively, then teaching hospitals need to consider working with TESOL instructors to develop an English for Medical Purposes (EMP) course as a standard offering for IMGs and any other nonnative English speaking hospital personnel. Some examples of how EMP courses can assist IMGs are providing an opportunity for IMGs to practice their listening comprehension of the different dialects that their patients are likely to speak and giving IMGs a chance to practice how to explain medical concepts using lay terms in a non-threatening environment, where any mistakes made will not affect the outcome of patient care.

Education and Training Issues for Nurses

Future studies might also want to explore how many nursing schools offer classes on either transcultural nursing or intercultural communication, the year they began to be offered, and the percentage of them that are required courses.

In nursing school, transcultural nursing classes need to be mandatory for all nursing students. However, this researcher is in agreement with Lajkowicz (1993) in that transcultural nursing classes should not be based on lecture alone, but should involve some field work in the hospital or clinic setting to prepare nurses for working with both patients and staff from different cultures. Transcultural nursing classes should not stop at the interview-a-person-from-another-culture project, which although interesting, does not give nursing students many of the skills that they will need once they have graduated and are working daily with a culturally diverse staff and patient population. The nursing management course described in Lajkowicz (1993), required students to work in small groups after the interviews (which were conducted with nurses or other nursing staff from a different culture) were completed to "analyze how staff members with diverse cultural beliefs could meet patient care needs along with unit and professional goals" (p. 236). This analysis was presented orally to the class and then given to the instructor in a written format, although also presenting a written analysis to the nurse manager of the particular unit on which the interviews took place could have perhaps actually helped staff members in their attempts to understand and communicate with each other. Having the students interview nurses seemed like an unique idea; another idea would be to have nurses also interview an IMG, or to have an IMG come to give an informal presentation about his/her cultural values or health care in his/her culture, which would not only give the nursing students information about a particular culture, but would also help the IMG practice his/her presentation skills in what this researcher believes would be a less threatening setting. Presenting information about his/her culture to a class of nursing students would probably be perceived as being less threatening to an IMG than presenting a patient case history to a room full of senior physicians. Another goal which would be met by such a presentation would be in line with Rubin and Smith's (1990) suggestion of getting students (in this case, nursing students) accustomed to listening to speakers who speak varying degrees of accented English, so that they would be less anxious listening to accented speech and also less likely to perceive those who speak accented English as being incompetent.

Ongoing diversity training classes also need to be offered to the nurses who have already graduated, as many nurses may have taken what Reed and Procter (1993) call the "utilitarian view" of nursing, learning only the "useful" knowledge directly applicable to patient care (p. 20). These nurses have probably passed up the opportunity to take a transcultural nursing class or a class on intercultural communication in nursing school, and thus still need to be taught these skills before it is too late: "the need to speak other languages or to respond to clients and staff who express different problems and act differently is often stressful and can lead to burnout, considerable anxiety, and fatigue" (Leininger, 1991, p. 59).

The increasing presence of IMGs in teaching hospitals across the United States, the lack of intercultural training or even cultural awareness in the staff (nurses and other hospital personnel) with whom these physicians will be working, points toward the chance of increased conflict between these two groups. For example, in the specialty of primary care (or internal medicine), 50% of the physicians in the United States are IMGs. Even in competitive residency programs, such as the one at Hospital A, one can find IMGs. This year at Hospital A, out of 525 physicians in the residency program, 38 are IMGs (Patty Peterson, personal communication, April 4, 1995). There is a growing need for those in nursing education, physician education and TESOL to work together to educate those in the medical profession not only about the existence of and the need to tolerate different kinds of Englishes, but also about the need to tolerate and respect people from different cultures. Only as tolerance increases towards both different kinds of accents and the speakers who produce them, will the negative effects of accented English be lessened.

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APPENDIX A

INTERPRETATION OF SPEAK TEST RESULTS

Overall Comprehensibility

0-90	Overall comprehensibility too low in even the simplest type of speech.
100-140	Generally not comprehensible because of frequent pauses and/or rephrasing, pronunciation errors, limited grasp of vocabulary, and lack of grammatical control.
150-190	Generally comprehensible but with frequent errors in pronunciation, grammar, choice of vocabulary items, and with some pauses or rephrasing.
200-240	Generally comprehensible with some errors in pronunciation, grammar, choice of vocabulary items, or with pauses or occasional rephrasing.
250-300	Completely comprehensible in normal speech, with occasional grammatical or pronunciation errors in very colloquial speech.

Pronunciation

0.0 - 0.4	Frequent phonemic errors and foreign stress and intonation patterns that cause the speaker to be unintelligible.
0.5-1.4	Frequent phonemic errors and foreign stress and intonation patterns that cause the speaker to be occasionally unintelligible.
1.5-2.4	Some consistent phonemic errors and foreign stress and intonation patterns but speaker is intelligible.
2.5-3.0	Occasional nonnative pronunciation errors but speaker is always intelligible.

Grammar

0.0-0.4	Virtually n grammatical or syntactical control except in simple stock phrases.
0.5-1.4	Some control of basic grammatical constructions but with major and/or repeated errors that interfere with overall intelligibility.

1.5-2.4	Generally good control in all constructions with grammatical errors that do not interfere with overall intelligibility.
2.5-3.0	Sporadic minor grammatical errors that could be made inadvertently by native speakers.

Fluency

0.0-0.4	Speech is so halting and fragmentary or has such a nonnative flow that intelligibility is virtually impossible.
0.5-1.4	Numerous nonnative pauses and/or a nonnative flow that interferes with intelligibility.
1.5-2.4	Some nonnative pauses that do not interfere with intelligibility.
2.5-3.0	Speech is smooth and effortless, closely approximating that of a native speaker.

SPEAK

Rating and Score Summary Sheet

Each diagnostic area is rated on a 0-3 scale.

Physician # 1	Jane Dresser	Sept 23/94
Examinee's Number	Rater's Name	Date

SECTION 2 ■ Reading Aloud

Pronunciation	3	2P
Fluency	3	2F
Comprehensibility	3	2C

SECTION 3 ■ Sentence Completion

	Grammar	Comprehensibility
1.	3	2
2.	3	2
3.	2	2
4.	2	2
5.	3	3
6.	3	2
7.	3	2
8.	3	3
9.	3	3
10.	3	3
Total	28	24
Average	2.8	2.4
	3G	3C

SECTION 4 ■ Picture Sequence

Pronunciation	3	4P
Fluency	2	4F
Comprehensibility	3	4C

SECTION 5 ■ Single Picture

	Pronunciation	Grammar	Fluency	Comprehensibility
1.	3	3	3	3
2.	3	3	3	3
3.	3	3	3	3
4.	3	3	3	3
Total	12	12	12	12
Average	3	3	3	3
	5P	5G	5F	5C

SECTION 6 ■ Free Response Questions

	Pronunciation	Fluency	Comprehensibility
1.	3	3	3
2.	3.	3	3
3.	3	3	3
Total	9	9	9
Average	3	3	3
	6P	6F	6C

SECTION 7 ■ Schedule

Pronunciation	3	7P
Fluency	3	7F
Comprehensibility	3	7C

Rater's Comments

Overall, excellent English speaking skills. The slightly reduced scores in section 3 were largely because of extensive pausing, which may have resulted from nervousness. I don't think they would have occurred in natural speech.

SCORE SUMMARY

	Pronunciation	Grammar	Fluency	Comprehensibility
Section: 2	2P 3		2F 3	2C 3
3		3G 2.8		3C 2.4
4	4P 3		4F 2	4C 3
5	5P 3	5G 3	5F 3	5C 3
6	6P 3		6F 3	6C 3
7	7P 3		7F 3	7C 3
TOTAL	15	5.8	14	17.4
AVERAGE	3	2.9	2.8	2.9
				×100 290
ROUNDED SCORE	3	2.9	2.8	

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SPEAK

Rating and Score Summary Sheet

Each diagnostic area is rated on a 0-3 scale.

Examinee's Number: Physician 3
Rater's Name: Jane Dresser
Date: 9/24/94

SECTION 2 ■ Reading Aloud

Pronunciation	2	2P
Fluency	3	2F
Comprehensibility	3	2C

SECTION 3 ■ Sentence Completion

	Grammar	Comprehensibility
1.	3	3
2.	2	3
3.	3	2
4.	3	2
5.	3	3
6.	3	2
7.	2	3
8.	3	3
9.	2	2
10.	3	2
Total	27	25
Average	2·7 3G	2·5 3C

SECTION 4 ■ Picture Sequence

Pronunciation	3	4P
Fluency	2	4F
Comprehensibility	3	4C

SECTION 5 ■ Single Picture

	Pronunciation	Grammar	Fluency	Comprehensibility
1.	3	3	3	3
2.	3	3	3	3
3.	3	3	3	3
4.	3	3	3	3
Total	12	12	12	12
Average	3 5P	3 5G	3 5F	3 5C

SECTION 6 ■ Free Response Questions

	Pronunciation	Fluency	Comprehensibility
1.	3	3	3
2.	3	2	3
3.	3	3	3
Total	9	8	9
Average	3 6P	2·67 6F	3 6C

SECTION 7 ■ Schedule

Pronunciation	3	7P
Fluency	3	7F
Comprehensibility	3	7C

Rater's Comments

Overall, very good English speaking skills some slight non-native intonation patterns, but these do not affect overall intelligibility.

SCORE SUMMARY

	Pronunciation	Grammar	Fluency	Comprehensibility
Section: 2	2P 2		2F 3	2C 3
3		3G 2·7		3C 2·5
4	4P 3		4F 2	4C 3
5	5P 3	5G 3	5F 3	5C 3
6	6P 3		6F 2·67	6C 3
7	7P 3		7F 3	7C 3
TOTAL	14	5·7	13·67	17·5
AVERAGE	2·8	2·85	2·734	2·916
				×100 291·6
ROUNDED SCORE	2·8	2·9	2·7	290

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APPENDIX B

SCRIPTS FOR FORMAL SPEAKING CONTEXTS

Script Number One (Read by the native Farsi speaking physician)

Mr. Jones is a 36 year old male who presented with left upper quadrant pain, fever and chills. On physical exam he was very tender in his left upper quadrant with guarding and rebound. Bowel sounds are absent. Plan today is for upper G.I., possible EDG or ERCP.

Type and cross him for four units packed red blood cells and transfuse each over two hours.

Script Number Two (Read by the native Japanese speaking physician)

Mr. Smith is a 64 year old gentleman with a three year history of progressive hip pain. This has been recalcitrant to non-steriodals and physical therapy. Radiograph shows severe osteoarthritis. He is indicated for a total hip arthroplasty that's scheduled for this morning.

Type and cross this patient for 2 units of blood pre-op.

Script Number Three (Read by the native English speaking physician)

Mr. Allen is a 75 year old white male in a tractor verses car MVA. No loss of consciousness. Obvious left tibial/fibular fracture. Abdominal distension with tenderness and peritoneal signs. Plan exploratory lap, ortho consult for orthopaedic injuries.

Please bolus Mr. Allen with one liter of lactated ringers.

APPENDIX C

SCRIPTS FOR INFORMAL SPEAKING CONTEXTS

Directions to the physicians: Please answer the question, "What will you do after you finish your residency?" Answer this question using exactly five sentences. Record your answer twice. Please do not say "thank you" at the end of your recording.

Script Number One (Native Farsi Speaking Physician)

Most likely I will do a fellowship in Emergency Medicine. Then after, I would like to start practicing Emergency Medicine in an academic center. Roughly half of my time would be spent in clinical medicine and the other half in the academic aspects of Emergency Medicine. I would also like to spent some time on international medicine, where I would travel to different parts of the world and try to establish the basis of this new field across the world - most likely I'm interested to do some emergency medical work in the Middle Eastern area. I'm hoping to stay around Pacific Northwest though, as my permanent place of living.

Script Number Two (Native Japanese Speaking Physician)

I'd like to do Cardiac Surgery. Start a cardiac transplant program. Run my own service. Then I'd like to go on a vacation trip all over the world. And then, build and buy my own house.

Script Number Three (Native English Speaking Physician)

When I finish my residency I want to initially be an Emergency Medicine physician somewhere in the Northwest. Having just moved to the area, I've fallen in love with the wilderness and would love to stay nearby to practice and play. One reason I chose

Emergency Medicine is to have free time to enjoy life and I can't think of a better place to enjoy it. Another option is a fellowship in either wilderness medicine or sports medicine. If I can't stay in the area to practice, I'll most likely move to the 'Carolinas or Virginia to be closer to family.

APPENDIX D

TWO PHYSICIAN CONSENT FORMS: NATIVE ENGLISH SPEAKER AND NONNATIVE ENGLISH SPEAKERS

INFORMED CONSENT FORM (for the Native English Speaking Physician)

Hospital A (original consent form had real name of hospital here)

Title: Evaluating Physician Personality Characteristics

Principal Investigator: Laura Horani (home phone). Advisor (PSU): Kimberley Brown (campus number).

Purpose: This study was designed to see how others evaluate physicians' personality characteristics when only limited information is available. This study involves research and the results will be discussed in the principal investigator's M.A. thesis. It is expected that your participation will not exceed twenty minutes.

Procedures: The study involves having you, the subject, first read a sample patient history out loud while speaking into a Sony Pressman mini tape recorder. Then you would read out loud a sample of a physician's verbal order to a nurse. Finally, you will be asked to give your answer to the question "What will you do after you finish your residency?" Your answer to this question will also be tape recorded. You will be recording everything three times.

Risks and Discomforts: As a result of this study, you, the subject, could become inconvenienced as it will take up some of your free time, approximately twenty minutes, that you would usually use for other purposes.

Benefits: You may not personally benefit from participation in this study, but by serving as a subject, you may contribute new information which may benefit others in the future.

Confidentiality: If your tape meets the researcher's criteria and is used in her M.A. thesis study, all of the taped information you give will be played for medical-surgical nurses to listen to and then evaluate, using a semantic differential scale. The information you provide will be kept confidential to the extent permitted by law. The names of any physicians recorded for this study will be kept confidential and not transmitted outside of Hospital A. Neither your name or identity will be used for publication purposes.

Costs: There will be no cost to you, the subject, to participate in this study. Each physician will receive a Starbuck's gift certificate (valued at $6.00) after finishing tape recording.

Liability: The ______, as an agency of the State, is covered by the State Liability Fund. If you suffer any injury from the research project, compensation would be available to you only if you establish that the injury occurred through the fault of _____, its officers or employees. If you have further questions, you should call ____ at(503)___-_____. Although this researcher is a student at Portland State University(PSU),there is no compensation or treatment available from the state of Oregon or PSU; and neither the state of Oregon nor PSU assume any responsibility if there is any injury as a result of this study.

Laura Horani has offered to answer any questions you might have about this research study. She can be reached at home ___-____ or at work ___-____. If you have any questions about your rights as a research subject, you may contact the ____ Institutional Review Board at ___-____. Participation in this study is voluntary. You may refuse to participate, or you may withdraw from this study at any time without affecting your relationship with or treatment at ____. After signing this consent form, you will receive a copy of it.

listen to and then evaluate, using a semantic differential scale. The information you provide will be kept confidential to the extent permitted by law. The names of any physicians recorded for this study will be kept confidential and not transmitted outside of Hospital A. Neither your name or identity will be used for publication purposes.

Costs: There will be no cost to you, the subject, to participate in this study. Each physician will receive a Starbuck's gift certificate (valued at $6.00) after finishing tape recording.

Liability: The ______, as an agency of the State, is covered by the State Liability Fund. If you suffer any injury from the research project, compensation would be available to you only if you establish that the injury occurred through the fault of _____, its officers or employees. If you have further questions, you should call ____ at (503)___-_____. Although this researcher is a student at Portland State University (PSU), there is no compensation or treatment available from the state of Oregon or PSU; and neither the state of Oregon nor PSU assume any responsibility if there is any injury as a result of this study.

Laura Horani has offered to answer any questions you might have about this research study. She can be reached at home ___-____ or at work ___-____. If you have any questions about your rights as a research subject, you may contact the ____ Institutional Review Board at ___-____. Participation in this study is voluntary. You may refuse to participate, or you may withdraw from this study at any time without affecting your relationship with or treatment at ____. After signing this consent form, you will receive a copy of it.

Your signature below indicates that you have read the foregoing and agree to participate in this study.

Subject: ______________________ Date: ______________________

Witness: ______________________ Date : ______________________

If you have any concerns or questions about this study, please contact the Chair of the Human Subjects Research Review Committee, Office of Research and Sponsored Projects, 105 Neuberger Hall, Portland State University, (503) ___-____.

Informed Consent Form (for the nonnative English speaking physicians)

Hospital A (in the original consent form, the real name of the hospital was here)

Title: Evaluating Physician Personality Characteristics

Principal Investigator: Laura Horani (home phone). Advisor (PSU): Kimberley Brown (campus number).

Purpose: This study was designed to see how others evaluate physicians' personality characteristics when only limited information is available. This study involves research and the results will be discussed in the principal investigator's M.A. thesis. It is expected that your participation will not exceed one hour.

Procedures: The study involves having you, the subject, first take the SPEAK test, a standardized test that measures spoken English proficiency. The test will be administered by the principal investigator and will take approximately thirty minutes. Second, you will be asked to read a sample patient history out loud while speaking into a Sony Pressman mini tape recorder. Third, you will be asked to give your own answer to the question "What will you do after you finish your residency?" Your answer to this question will also be tape recorded. You will be recording everything (from the patient history to your answer to the question regarding your future plans) three times.

Risks and Discomforts: As a result of this study, you, the subject, could become inconvenienced as it will take up some of your free time, approximately forty-five minutes, that you would usually use for other purposes.

Benefits: You may not personally benefit from participation in this study, but by serving as a subject, you may contribute new information which may benefit others in the future.

Confidentiality: If your score on the SPEAK test falls in the same range as the other physicians that took this test, then your tape will be used in her M.A. thesis study. Your tape will be played for medical-surgical nurses to listen to and then evaluate, using a semantic differential scale. All of the information you provide will be kept confidential to the extent permitted by law. The names of any physicians recorded for this study will be kept confidential and not transmitted outside of Hospital A. Neither your name or identity will be used for publication purposes.

Costs: There will be no cost to you, the subject, to participate in this study. Each physician whose first language is not English will take the SPEAK test (which usually costs $70.00 per person) at no charge. He will also receive $20.00 cash after finishing tape recording.

Liability: The ______, as an agency of the State, is covered by the State Liability Fund. If you suffer any injury from the research project, compensation would be available to you only if you establish that the injury occurred through the fault of _____, its officers or employees. If you have further questions, you should call ____ at (503)___-_____. Although this researcher is a student at Portland State University (PSU), there is no compensation or treatment available from the state of Oregon or PSU; and neither the state of Oregon nor PSU assume any responsibility if there is any injury as a result of this study.

Laura Horani has offered to answer any questions you might have about this research study. She can be reached at home ___-____ or at work ___-____. If you have any questions about your rights as a research subject, you may contact the ____ Institutional

Review Board at ___-____. Participation in this study is voluntary. You may refuse to participate, or you may withdraw from this study at any time without affecting your relationship with or treatment at ____. After signing this consent form, you will receive a copy of it.

Your signature below indicates that you have read the foregoing and agree to participate in this study.

Subject: ______________________________ Date: ________________________

Witness: ______________________________ Date : ________________________

If you have any concerns or questions about this study, please contact the Chair of the Human Subjects Research Review Committee, Office of Research and Sponsored Projects, 105 Neuberger Hall, Portland State University, (503) ___-____.

APPENDIX E

TWO SAMPLE LETTERS SENT TO MEDICAL-SURGICAL NURSES

Sample Letter sent to nurses at Hospital A

Hello!

My name is Laura Horani (and I work on __) and your department director has allowed me to approach you about being a participant in the research project I am doing through Portland State for my Master's Degree.

My research project would involve you listening to 3 anonymous physicians speaking on cassette tapes. Each physician speaks for 3-4 minutes. After you listen to each one, you choose adjectives that are given to you in pairs on a semantic differential scale. You select the adjective you feel best describes each physician. It will take 15-25 minutes of your time, depending on how fast you make your judgments.

I try to make this as convenient as possible for you by meeting you whenever you want! Of course, it can't be during the time you are being paid to be here, so we would have to meet during your break (lunch/dinner) or before/after your shift. But I am willing to meet you on your floor at almost any time (except Monday, Wednesday, and Thursday 9:00-1:00 or Tuesday & Friday 11:00-1:00 p.m., because I have to take my child to preschool or attend class at PSU at these times).

What do you get out of this??? A really neat pen on a rope and the knowledge that you are helping a fellow employee graduate. I am waiting to hear if I will be presenting the results of this study at an Applied Linguistics conference in California in Spring 1995, in which case you could help put Portland on the map.

Please give me a call at home ___-____ and leave me a message telling me your name, floor, and date/time best for us to meet as soon as possible. After I finish with Med-Surg nurses at Hospital A, I will go on to Hospital B and Hospital C.

Thanks for your time!

Sincerely,

Laura A. Horani

Sample letter sent to nurses at Hospital B:

Hello!

My name is Laura Horani and I am a graduate student at Portland State University. Your nurse manager has given me permission to approach you about being a participant in the research project I am doing for my thesis for a degree in Applied Linguistics.

I am studying nurses' reactions to physicians. My research project would involve you listening to 3 anonymous physicians speaking on cassette tapes. Each physician speaks for 3-4 minutes. After you listen to each one, you choose adjectives that are given to you in pairs on a semantic differential scale. You select the adjective you feel best describes each physician. It will take 15-25 minutes of your time, depending on how fast you make your judgments. Most nurses are able to complete this study in **15 minutes**.

What do you get out of this??? A really neat pen on a rope (and it takes refills, so it could last you forever) and the knowledge that you are helping someone to graduate. Also, I will be presenting the results of this study at a national linguistics conference in Long Beach, California in March, so I would be grateful and appreciative of your support.

So, if you are totally excited about this study, give me a call at home ___-____. If you do not want to go to this effort, that's okay too because I will be on your floor beginning with **evening shift** on **December 19th**. I will be asking you in person if you would like to participate. If you do not wish to take part in this study, a simple "no" will suffice when I approach you (no long explanations required). Having just completed gathering my data at Hospital A, I am able to take occasional rejection quite gracefully.

After about 40 Hospital B nurses take part in this study, I will move on to Hospital C.

Thanks so much for your time. I look forward to meeting you!

Sincerely,

Laura A. Horani

P.S. If I come up to you on a particularly hectic day but you would still like to participate in my study, just let me know and I'll arrange to come back at a more convenient time.

APPENDIX F

SAMPLE LETTER SENT TO DEPARTMENT DIRECTORS AT HOSPITAL A

To:_________________, ___ Department Director

From: Laura Horani, ___ Health Unit Coordinator and graduate student at PSU

Re: A thesis study involving med-surg nurses on ___

Hi! My name is Laura Horani and I've worked at Hospital A as a health unit coordinator since 1985. I'm also a graduate student working towards a Master's degree in Teaching English to Speakers of Other Languages (TESOL) through the department of Applied Linguistics at Portland State. I am ready to start my thesis, which is a language attitude study that will look at how nurses perceive a physician's personality (and medical competency) when they only have a limited amount of information available, such as when they are speaking to a physician over the telephone.

Right now I am in the process of submitting my application to do research here at Hospital A . What I am wondering is, once I am approved, would you allow me to do my study on your floor(s)? What I would need is a list of all RNs (regular FTE and resource) so that I could do a systematic random selection (for example, choosing every third name on a list). Then I would contact each RN chosen and ask if she would be interested in listening to 3 audiotaped physicians and filling in a questionnaire (this would take 20 minutes at most). I would come to the floor at the nurses' convenience, preferably before their shift begins. I would also like to use your floor's conference room or staff lounge to do this study as people are more likely to be willing to participate if they do not have to walk too far. Each RN who completes a questionnaire will receive a pen on a rope. I would like to begin gathering my data in October.

If you are willing to allow me to carry out my research project on your floor, please let me know by leaving me a message at home (___-____) or by dropping me a note here at work (Mail code ____). Or, if you have any questions, please do not hesitate to call. I look forward to hearing from you. Thank you for your time.

cc: ______________________(names of the department directors this memo was sent to)

APPENDIX G

FACTOR ANALYSIS RESULTS FOR 22-ITEM SEI (ZAHN & HOPPER, 1991)

Superiority subscale

1. literate-illiterate
2. educated-uneducated
3. upper class-lower class*
4. rich-poor
5. intelligent-unintelligent
6. white-collar-blue collar*
7. clear-unclear
8. fluent-disfluent

Attractiveness subscale

1. sweet-sour*
2. nice-awful
3. good-natured-hostile
4. kind-unkind
5. warm-cold
6. friendly-unfriendly
7. pleasant-unpleasant
8. likeable-unlikable

Dynamism subscale

1. active-passive
2. talkative-shy
3. aggressive-unaggressive
4. enthusiastic-hesitant
5. confident-unsure
6. strong-weak

Note. *Indicates an item that was not included in the present investigation.

APPENDIX H

RESULTS OF INFORMAL SURVEY

When did you graduate?	Which nursing school?	Did you have a transcultural nursing class or anything similar?	How long did it last?	Taught by...
1. 1993	OHSU	Yes, TCNC	1 term	instructor
2. 1993	Pacific Lutheran	A section of a class on different cultures	?	student presentations
3. 1985	Cen. Ore. Comm. College	death, pain in different cultures	section of a class	instructor
4. 1975	Ptld Comm. College	No	--	--
5. 1974/1987	Clark College/OHSU	At OHSU in Family nursing class	a couple of classes	instructor
6. 1989	OHSU	No.	--	--
7. 1990	Ptld Comm. College	No.	--	--
8. 1977	Ptld Comm. College	No.	--	--
9. 1981	Baptist Nursing School (Little Rock,Ark)	No.	--	--
10. 1987	Univ of Ptld.	No.	No.	No.
11. 1990	OHSU	1 lecture	1 lecture	instructor
12. 1989	OHSU	No.	--	--
13. 1994	OHSU	Yes, TCNC, as an elective.	1 term	instructor
14. 1992	Univ of Florida	Yes, TCNC.	1 semester	instructor
15. 1993	Linfield	Yes, cultural diversity class	1 semester	instructor
16. 1974	Mayo (Minn.)	No.	--	--
17. 1988	Biola	Yes, part of a class	approx. 1 week	instructor
18. 1987	OHSU	Yes, on different cultures	a few class periods	I instructor
19. 1988	OHSU	No.	--	--

Note. TCNC = Transcultural nursing class; ? = the nurse did not remember the length of time that was given to this topic.

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APPENDIX I

CONSENT FORMS FOR THE MEDICAL-SURGICAL NURSES AT HOSPITALS A, AND B & C

Informed Consent Form

Hospital A (in the original consent form the real name of the hospital was here)

Title: Evaluating Physician's Personality Characteristics

Principal Investigator: Laura Horani (___-____). Advisor (PSU): Kimberley Brown (campus telephone number).

Purpose: This study was designed to see how others evaluate physicians' personality characteristics when only limited information is available. This study involves research and the results will be discussed in the principal investigator's M.A. thesis. It is expected that your participation will not exceed twenty minutes.

Procedures: The study involves having you, the subject, listen to three anonymous audiotaped speakers, each speaking in two different situations. You will then fill in a questionnaire that uses adjective pairs, such as happy/sad, to evaluate each speaker. The questionnaire also includes six demographic questions about yourself.

Risks and Discomforts: As a result of this study, you, the subject, could become inconvenienced as it will take up some of your free time, approximately 20 minutes, that you would usually use for other purposes.

Benefits: You may not personally benefit from participation in this study, but by serving as a subject, you may contribute new information which may benefit others in the future.

Confidentiality: All of the information you give will be part of the data that will be reported as a group and will be kept confidential to the extent permitted by law. Your name/identity will not be recorded on, or linked to the questionnaire responses. The names of any subjects in the study will be kept confidential and will not be used for publication or publicity purposes.

Costs: There will be no cost to you, the subject, to participate in this study. Each subject will receive a black ball point pen after completing the questionnaire.

Liability: The _____, as an agency of the State, is convered by the State Liability Fund. If you suffer any injury from the research project, compensation would be available to you only if you establish that the injury occurred through through the fault of the University, its officers or employees. If you have further questions, you should call Dr. __________ at (503)___-____. Although the researcher is a student at Portland State University (PSU), there is no compensation or treatment available from the state of Oregon or PSU; and neither the state of Oregon nor PSU assumes any responsibility if there is any injury as a result of this study.

Laura Horani has offered to answer any questions you might have about this research study. She can be reached at home ___-____ or at work ___-____. If you have questions about your rights as a research subject, you may contact the ____ Institutional Review Board at (503)___-____. Participation in this study is voluntary. You may refuse to participate, or you may withdraw from this study at any time without affecting your relationship with or treatment at the ______. After signing the consent form, you will receive a copy of it.

Your signature below indicates that you have read the foregoing and agree to participate in this study.

Subject:____________________________________ Date:__________________

Witness: ___________________________________ Date:__________________

If you have any concerns or questions about this study, please contact the Chair of the Human Subjects Research Review Committee, Office of Research and Sponsored Projects, 105 Neuberger Hall, Portland State University, (503) ___-____.

Informed Consent Form

Hospitals B & C (on original form, the name of the health care system was here)

Title: Evaluating Physician's Personality Characteristics

Principal Investigator: Laura Horani (___-____). Advisor(PSU): Kimberley Brown (campus telephone number).

Purpose: This study was designed to see how others evaluate physicians' personality characteristics when only limited information is available. This study involves research and the results will be discussed in the principal investigator's M.A. thesis. The researcher hopes to have a total of 200 subjects from area hospitals participate in this study. It is expected that your participation will not exceed twenty minutes.

Procedures: The study involves having you, the subject, listen to three anonymous audiotaped speakers, each speaking in two different situations. You will then fill in a questionnaire that uses adjective pairs, such as happy/sad, to evaluate each speaker. The questionnaire also includes six demographic questions about yourself.

Risks and Discomforts: As a result of this study, you, the subject, could become inconvenienced as it will take up some of your free time, approximately 20 minutes, that you would usually use for other purposes.

Benefits: You may not personally benefit from participation in this study, but by serving as a subject, you may contribute new information which may benefit others in the future.

Confidentiality: All of the information you give will be part of the data that will be reported as a group and will be kept confidential to the extent permitted by law. Both the consent forms and the completed questionnaire for each subject will be kept locked up in a file cabinet at the researcher's home. Both the consent forms and the completed questionnaire for each subject will be kept locked up in a file cabinet at the researcher's home. When the information from the study is distributed (e.g., published or discussed), the researcher will not mention the hospitals by name and the results will be presented or reported as a whole, not individually (subject by subject). Neither your name or identity will be used for publication or publicity purposes.

Costs: There will be no cost to you, the subject, to participate in this study. Each subject will receive a black ball point pen after completing the questionnaire

For questions you might have related to this study: Please call Laura Horani at ___-____ with any questions you might have concerning this study.

In the event of a research related injury: Please call Laura Horani 24 hours/day at ___-____.

Liability: ________ Health System is composed of non-profit hospitals that are dedicated to provide medical treatment for injury or illness. Should you suffer any injury as a result of this research project, emergency medical treatment will be available. However, compensation for emergency medical treatment will be available from the hospital only if you establish that the injury occurred through the fault of the hospital, its physicians, officers or employees. Further information regarding this policy, or questions concerning your rights as a research participant may be obtained from the Office of Research Administration at ___-____.

Although the researcher is a student at Portland State University (PSU), there is no compensation or treatment available from the state of Oregon or PSU; and neither the state of Oregon nor PSU assumes any responsibility if there is any injury as a result of this study.

Participation in this study: Participation in this study is voluntary. You are free to refuse to participate or to withdraw from participation in this study at any time and it will in no way affect your relationship with, or treatment at ______ Health Systems. To withdraw from this study, simply turn in your questionnaire and pen to the researcher at any time during the study.

Your participation in this study may be terminated by the researcher without regard to your consent in the following circumstances: 1) if you fall asleep during the study, or 2) if you fail to answer all of the questions on the questionnaire.

After signing this consent form, you will receive a copy of it.

Signatures:

I have read and understood the foregoing.

Subject: ______________________________ Date: ________________________

Witness: ______________________________ Date: ________________________

If you have any concerns or questions about this study, please contact the Chair of the Human Subjects Research Review Committee, Office of Research and Sponsored Projects, 105 Neuberger Hall, Portland State University, (503) ___-____.

APPENDIX J

PILOT STUDY QUESTIONNAIRE

Portland State University

Department of Applied Linguistics

Social Psychological Questionnaire

Please rate the speaker on each of the following items, placing a mark in the space nearest the adjective you feel best represents your reaction to his speech. As you complete each item, keep in mind the phrase "The speaker sounded."

EXAMPLE:

colorful	____:	____:	____:	____:	____:	____:	____	drab
	+3	+2	+1	0	-1	-2	-3	

The (3) positions correspond to very, quite a lot.

The (2) positions correspond to rather, more than a little.

The (1) positions correspond to a little, somewhat.

The (0) position corresponds to equally balanced.

Tape Number: _______

Situation #1

nice ____:____:____:____:____:____:____ awful

vague ____:____:____:____:____:____:____ precise

strong ____:____:____:____:____:____:____ weak

educated ____:____:____:____:____:____:____ uneducated

poor ____:____:____:____:____:____:____ rich

intelligent ____:____:____:____:____:____:____ unintelligent

unclear ____:____:____:____:____:____:____ clear

unaggressive ____:____:____:____:____:____:____ aggressive

warm ____:____:____:____:____:____:____ cold

friendly ____:____:____:____:____:____:____ unfriendly

lower class ____:____:____:____:____:____:____ upper class

unlikable ____:____:____:____:____:____:____ likeable

pleasant ____:____:____:____:____:____:____ unpleasant

fluent ____:____:____:____:____:____:____ disfluent

passive ____:____:____:____:____:____:____ active

talkative ____:____:____:____:____:____:____ shy

unkind ____:____:____:____:____:____:____ kind

enthusiastic ____:____:____:____:____:____:____ hesitant

hostile ____:____:____:____:____:____:____ good natured

confident ____:____:____:____:____:____:____ unsure

illiterate ____:____:____:____:____:____:____ literate

white-collar ____:____:____:____:____:____:____ blue-collar

sour ____:____:____:____:____:____:____ sweet

Situation #2

nice ____:____:____:____:____:____:____ awful

vague ____:____:____:____:____:____:____ precise

strong ____:____:____:____:____:____:____ weak

educated ____:____:____:____:____:____:____ uneducated

poor ____:____:____:____:____:____:____ rich intelligent ____:____:____:____:____:____:____ unintelligent

unclear ____:____:____:____:____:____:____ clear

unaggressive ____:____:____:____:____:____:____ aggressive

warm ____:____:____:____:____:____:____ cold

friendly ____:____:____:____:____:____:____ unfriendly

lower class ____:____:____:____:____:____:____ upper class

unlikable ____:____:____:____:____:____:____ likeable

pleasant ____:____:____:____:____:____:____ unpleasant

fluent ____:____:____:____:____:____:____ disfluent

passive ____:____:____:____:____:____:____ active

talkative ____:____:____:____:____:____:____ shy

unkind ____:____:____:____:____:____:____ kind

enthusiastic ____:____:____:____:____:____:____ hesitant

hostile ____:____:____:____:____:____:____ good natured

confident ____:____:____:____:____:____:____ unsure

illiterate ____:____:____:____:____:____:____ literate

white-collar ____:____:____:____:____:____:____ blue-collar

sour ____:____:____:____:____:____:____ sweet

Tape Number:________

Situation #1

nice ____:____:____:____:____:____:____ awful vague ___:___:___:___:___:___:___ precise

strong ___:___:___:___:___:___:___ weak

educated ___:___:___:___:___:___:___ uneducated

poor ___:___:___:___:___:___:___ rich

intelligent ___:___:___:___:___:___:___ unintelligent

unclear ___:___:___:___:___:___:___ clear

unaggressive ___:___:___:___:___:___:___ aggressive

warm ___:___:___:___:___:___:___ cold

friendly ___:___:___:___:___:___:___ unfriendly

lower class ___:___:___:___:___:___:___ upper class

unlikable ___:___:___:___:___:___:___ likeable

pleasant ___:___:___:___:___:___:___ unpleasant

fluent ___:___:___:___:___:___:___ disfluent

passive ___:___:___:___:___:___:___ active

talkative ___:___:___:___:___:___:___ shy

unkind ___:___:___:___:___:___:___ kind

enthusiastic ___:___:___:___:___:___:___ hesitant

hostile ___:___:___:___:___:___:___ good natured

confident ___:___:___:___:___:___:___ unsure

illiterate ___:___:___:___:___:___:___ literate

white-collar ___:___:___:___:___:___:___ blue-collar

sour ___:___:___:___:___:___:___ sweet

Situation #2

nice	____:____:____:____:____:____:____	awful
vague	____:____:____:____:____:____:____	precise
strong	____:____:____:____:____:____:____	weak
educated	____:____:____:____:____:____:____	uneducated
poor	____:____:____:____:____:____:____	rich
intelligent	____:____:____:____:____:____:____	unintelligent
unclear	____:____:____:____:____:____:____	clear
unaggressive	____:____:____:____:____:____:____	aggressive
warm	____:____:____:____:____:____:____	cold
friendly	____:____:____:____:____:____:____	unfriendly
lower class	____:____:____:____:____:____:____	upper class
unlikable	____:____:____:____:____:____:____	likeable
pleasant	____:____:____:____:____:____:____	unpleasant
fluent	____:____:____:____:____:____:____	disfluent
passive	____:____:____:____:____:____:____	active
talkative	____:____:____:____:____:____:____	shy
unkind	____:____:____:____:____:____:____	kind
enthusiastic	____:____:____:____:____:____:____	hesitant
hostile	____:____:____:____:____:____:____	good natured
confident	____:____:____:____:____:____:____	unsure
illiterate	____:____:____:____:____:____:____	literate

white-collar ___:___:___:___:___:___:___ blue-collar

sour ___:___:___:___:___:___:___ sweet

Tape Number: _______

Situation #1

nice ___:___:___:___:___:___:___ awful

vague ___:___:___:___:___:___:___ precise

strong ___:___:___:___:___:___:___ weak

educated ___:___:___:___:___:___:___ uneducated

poor ___:___:___:___:___:___:___ rich

intelligent ___:___:___:___:___:___:___ unintelligent

unclear ___:___:___:___:___:___:___ clear

unaggressive ___:___:___:___:___:___:___ aggressive

warm ___:___:___:___:___:___:___ cold

friendly ___:___:___:___:___:___:___ unfriendly

lower class ___:___:___:___:___:___:___ upper class

unlikable ___:___:___:___:___:___:___ likeable

pleasant ___:___:___:___:___:___:___ unpleasant

fluent ___:___:___:___:___:___:___ disfluent

passive ___:___:___:___:___:___:___ active

talkative ___:___:___:___:___:___:___ shy

unkind ___:___:___:___:___:___:___ kind

enthusiastic	___:___:___:___:___:___:___	hesitant
hostile	___:___:___:___:___:___:___	good natured
confident	___:___:___:___:___:___:___	unsure
illiterate	___:___:___:___:___:___:___	literate
white-collar	___:___:___:___:___:___:___	blue-collar
sour	___:___:___:___:___:___:___	sweet

Situation #2

nice	___:___:___:___:___:___:___	awful
vague	___:___:___:___:___:___:___	precise
strong	___:___:___:___:___:___:___	weak
educated	___:___:___:___:___:___:___	uneducated
poor	___:___:___:___:___:___:___	rich
intelligent	___:___:___:___:___:___:___	unintelligent
unclear	___:___:___:___:___:___:___	clear
unaggressive	___:___:___:___:___:___:___	aggressive
warm	___:___:___:___:___:___:___	cold
friendly	___:___:___:___:___:___:___	unfriendly
lower class	___:___:___:___:___:___:___	upper class
unlikable	___:___:___:___:___:___:___	likeable
pleasant	___:___:___:___:___:___:___	unpleasant
fluent	___:___:___:___:___:___:___	disfluent
passive	___:___:___:___:___:___:___	active

talkative	____:____:____:____:____:____:____	shy
unkind	____:____:____:____:____:____:____	kind
enthusiastic	____:____:____:____:____:____:____	hesitant
hostile	____:____:____:____:____:____:____	good natured
confident	____:____:____:____:____:____:____	unsure
illiterate	____:____:____:____:____:____:____	literate
white-collar	____:____:____:____:____:____:____	blue-collar
sour	____:____:____:____:____:____:____	sweet

To conclude, please fill in the demographic information below:

1. Do you consider yourself fluent (or fully conversant) in any other languag[illegible]side English? _____yes If yes, which language(s)? ________________

   _____no

2. How many years have you been a nurse?

   _____ less than one year

   _____ one - five years

   _____ six - ten years

   _____ eleven - fifteen years

   _____ sixteen or more years

3. Have you ever travelled overseas?

   _____ yes If yes, where? ________________________________

   _____ no For how long? ________________________________

4. Have you ever worked overseas?

_____ yes If yes, where? ____

_____ no For how long? ____

5. I am comfortable communicating with people from other cultures.

____ strongly agree

____ agree

____ not sure

____ disagree

____ strongly disagree

6. I work well with people from other cultures.

____ strongly agree

____ agree

____ not sure

____ disagree

____ strongly disagree

7. Which adjective pairs, if any, do you think do not need to be included in this study?

(List no more than 3 adjective pairs, please.)

8. What year do you think these physicians are in their residency program?

____ intern; ____ second year (1st year resident); ____ third year (Jr. resident);

____ fifth year resident (chief resident); ____ sixth year

** If you already know which year the physicians are (because I've told you about my study in the past), please tell me which year you think other RN s (who don't know this information) will think these physicians are. Write your answer here:

Thank you very much for participating. All of your answers will be kept confidential.

APPENDIX K

QUESTIONNAIRE USED IN THE ACTUAL STUDY

Portland State University

Department of Applied Linguistics

Social Psychological Questionnaire

Please rate the speaker on each of the following items, placing a mark in the space nearest the adjective you feel best represents your reaction to his speech. As you complete each item, keep in mind the phrase "The speaker sounded."

EXAMPLE:

colorful ___:___:___:___:___:___:___ drab
+3 +2 +1 0 -1 -2 -3

The (3) positions correspond to very, quite a lot.

The (2) positions correspond to rather, more than a little.

The (1) positions correspond to a little, somewhat.

The (0) position corresponds to equally balanced.

Tape Number: _______

Situation #1

nice	___:___:___:___:___:___:___	awful
vague	___:___:___:___:___:___:___	precise
strong	___:___:___:___:___:___:___	weak
educated	___:___:___:___:___:___:___	uneducated
poor	___:___:___:___:___:___:___	rich
intelligent	___:___:___:___:___:___:___	unintelligent
unclear	___:___:___:___:___:___:___	clear

unaggressive ____:____:____:____:____:____:____ aggressive

warm ____:____:____:____:____:____:____ cold

friendly ____:____:____:____:____:____:____ unfriendly

illiterate ____:____:____:____:____:____:____ literate

likable ____:____:____:____:____:____:____ unlikeable

pleasant ____:____:____:____:____:____:____ unpleasant

disfluent ____:____:____:____:____:____:____ fluent

passive ____:____:____:____:____:____:____ active

talkative ____:____:____:____:____:____:____ shy

unkind ____:____:____:____:____:____:____ kind

enthusiastic ____:____:____:____:____:____:____ hesitant

hostile ____:____:____:____:____:____:____ good natured

confident ____:____:____:____:____:____:____ unsure

Situation=2

nice ____:____:____:____:____:____:____ awful

vague ____:____:____:____:____:____:____ precise

strong ____:____:____:____:____:____:____ weak

educated ____:____:____:____:____:____:____ uneducated

poor ____:____:____:____:____:____:____ rich

intelligent ____:____:____:____:____:____:____ unintelligent

unclear ____:____:____:____:____:____:____ clear

unaggressive ____:____:____:____:____:____:____ aggressive

warm	____:____:____:____:____:____:____	cold
friendly	____:____:____:____:____:____:____	unfriendly
illiterate	____:____:____:____:____:____:____	literate
likable	____:____:____:____:____:____:____	unlikeable
pleasant	____:____:____:____:____:____:____	unpleasant
disfluent	____:____:____:____:____:____:____	fluent
passive	____:____:____:____:____:____:____	active
talkative	____:____:____:____:____:____:____	shy
unkind	____:____:____:____:____:____:____	kind
enthusiastic	____:____:____:____:____:____:____	hesitant
hostile	____:____:____:____:____:____:____	good natured
confident	____:____:____:____:____:____:____	unsure

Tape Number:________

Situation #1

nice	____:____:____:____:____:____:____	awful
vague	____:____:____:____:____:____:____	precise
strong	____:____:____:____:____:____:____	weak
educated	____:____:____:____:____:____:____	uneducated
poor	____:____:____:____:____:____:____	rich
intelligent	____:____:____:____:____:____:____	unintelligent
unclear	____:____:____:____:____:____:____	clear

unaggressive ____:____:____:____:____:____:____ aggressive

warm ____:____:____:____:____:____:____ cold

friendly ____:____:____:____:____:____:____ unfriendly

illiterate ____:____:____:____:____:____:____ literate

likable ____:____:____:____:____:____:____ unlikeable

pleasant ____:____:____:____:____:____:____ unpleasant

disfluent ____:____:____:____:____:____:____ fluent

passive ____:____:____:____:____:____:____ active

talkative ____:____:____:____:____:____:____ shy

unkind ____:____:____:____:____:____:____ kind

enthusiastic ____:____:____:____:____:____:____ hesitant

hostile ____:____:____:____:____:____:____ good natured

confident ____:____:____:____:____:____:____ unsure

Situation #2:

nice ____:____:____:____:____:____:____ awful

vague ____:____:____:____:____:____:____ precise

strong ____:____:____:____:____:____:____ weak

educated ____:____:____:____:____:____:____ uneducated

poor ____:____:____:____:____:____:____ rich

intelligent ____:____:____:____:____:____:____ unintelligent

unclear ____:____:____:____:____:____:____ clear

unaggressive ____:____:____:____:____:____:____ aggressive

warm ___:___:___:___:___:___:___ cold

friendly ___:___:___:___:___:___:___ unfriendly

illiterate ___:___:___:___:___:___:___ literate

likable ___:___:___:___:___:___:___ unlikable

pleasant ___:___:___:___:___:___:___ unpleasant

disfluent ___:___:___:___:___:___:___ fluent

passive ___:___:___:___:___:___:___ active

talkative ___:___:___:___:___:___:___ shy

unkind ___:___:___:___:___:___:___ kind

enthusiastic ___:___:___:___:___:___:___ hesitant

hostile ___:___:___:___:___:___:___ good natured

confident ___:___:___:___:___:___:___ unsure

Tape Number:_______

Situation #1

nice ___:___:___:___:___:___:___ awful

vague ___:___:___:___:___:___:___ precise

strong ___:___:___:___:___:___:___ weak

educated ___:___:___:___:___:___:___ uneducated

poor ___:___:___:___:___:___:___ rich

intelligent ___:___:___:___:___:___:___ unintelligent

unclear ___:___:___:___:___:___:___ clear unaggressive ___:___:___:___:___:___:___ aggressive

warm ___:___:___:___:___:___:___ cold

friendly ___:___:___:___:___:___:___ unfriendly

illiterate ___:___:___:___:___:___:___ literate

likable ___:___:___:___:___:___:___ unlikable

pleasant ___:___:___:___:___:___:___ unpleasant

disfluent ___:___:___:___:___:___:___ fluent

passive ___:___:___:___:___:___:___ active

talkative ___:___:___:___:___:___:___ shy

unkind ___:___:___:___:___:___:___ kind

enthusiastic ___:___:___:___:___:___:___ hesitant

hostile ___:___:___:___:___:___:___ good natured

confident ___:___:___:___:___:___:___ unsure

Situation #2

nice ___:___:___:___:___:___:___ awful

vague ___:___:___:___:___:___:___ precise

strong ___:___:___:___:___:___:___ weak

educated ___:___:___:___:___:___:___ uneducated

poor ___:___:___:___:___:___:___ rich

intelligent ___:___:___:___:___:___:___ unintelligent

unclear ___:___:___:___:___:___:___ clear

unaggressive ___:___:___:___:___:___:___ aggressive

warm	____:____:____:____:____:____:____	cold
friendly	____:____:____:____:____:____:____	unfriendly
illiterate	____:____:____:____:____:____:____	literate
likable	____:____:____:____:____:____:____	unlikable
pleasant	____:____:____:____:____:____:____	unpleasant
disfluent	____:____:____:____:____:____:____	fluent
passive	____:____:____:____:____:____:____	active
talkative	____:____:____:____:____:____:____	shy
unkind	____:____:____:____:____:____:____	kind
enthusiastic	____:____:____:____:____:____:____	hesitant
hostile	____:____:____:____:____:____:____	good natured
confident	____:____:____:____:____:____:____	unsure

To conclude, please fill in the demographic information below:

1 Do you consider yourself fluent (or fully conversant) in any other language(s) beside English? _____yes If yes, what langauges? ______________________________

______no

2. How many years have you been a nurse?

____ less than one year

____ one - five years

____ six - -ten years

____ eleven - fifteen years

____ sixteen or more years

3. Have you ever traveled overseas?

____ yes If yes, where? ____________________. For how long? _______________

____no

4. Have you ever worked overseas?

____yes If yes, where? _____________________ For how long? ____________

____no

5. I am comfortable communicating with people from other cultures.

____ strongly agree

____ agree

____ not sure

____ disagree

____ strongly disagree

6. I work well with people from other cultures.

____ strongly agree

____ agree

____ not sure

____ disagree

____ strongly disagree

Thank you very much for participating. All of your answers will be kept confidential.

APPENDIX L

FACTOR ANALYSIS RESULTS: OBLIMIN ROTATION

Results of Principal Axes Factor Analysis (Oblimin Rotation)

Variable	Factor I (Superiority)	Factor II (Attractiveness)	Factor III (Dynamism)
1. Nice-Awful	.13	**-.73**	.01
2. Vague-Precise	**.71**	.06	.12
3. Strong-Weak	**.52**	-.09	.21
4. Educated-Uneducated	**.74**	-.09	-.09
5. Poor-Rich	.09	-.06	**.51**
6. Intelligent-Unintelligent	**.81**	-.07	-.11
7. Unclear-Clear	**.71**	.04	.11
8. Unaggressive-Aggressive	.18	.28	**.69**
9. Warm-Cold	.02	**-.85**	-.04
10. Friendly-Unfriendly	.03	**-.90**	-.01
11. Illiterate-Literate	**.79**	-.09	-.08
12. Likable-Unlikable	.09	**-.82**	-.04
13. Pleasant-Unpleasant	.13	**-.80**	-.05
14. Disfluent-Fluent	**.71**	-.06	.07
15. Passive-Active	.27	.02	**.63**
16. Talkative-Shy	-.15	-.32	**.69**
17. Unkind-Kind	.03	**-.70**	.10
18. Enthusiastic-Hesitant	.02	-.32	**.62**
19. Hostile-Good natured	-.04	**-.76**	.14
20. Confident-Unsure	**.52**	-.04	.32
Number of items	8	7	5
Eigenvalue	8.39	2.53	1.19
Percent of Variance Accounted for	41.9	12.6	6.0

APPENDIX M

PHYSICIAN RATINGS: FLOOR BY FLOOR

How the Physicians Were Rated Within Each Hospital

Hospital A			
Location	Number of RNs	Tape Number	Mean Score
10A	13	**94**	**205.92**
		53	204.54
		76	196.54
9CVA	13	**53**	**217.46**
		94	202.31
		76	201.69
8A	15	**53**	**202.60**
		94	194.40
		76	188.60
8C	7	**94**	**213.71**
		53	200.57
		76	188
7C-04	2	**76**	**252**
		94	223.50
		53	203
7CVA	8	**53**	**216.63**
		76	204
		94	197.38
5A/C	15	**94**	**206.87**
		53	204.33
		76	196.93
M/S F.P.	6	**53**	**204.67**
		76	184.67
		94	167.33
Other	3	**53**	**217.67**
		94	207.76
		76	197.33

Note. Tape Number 53 = Native English Speaking Physician
Tape Number 76 = Native Japanese Speaking Physician
Tape Number 94 = Native Farsi Speaking Physician

How the Physicians Were Rated Within Each Hospital (continued)

Hospital B			
Location	Number of RNs	Tape Number	Mean Score
4 West	12	**53**	**214.50**
		94	200.58
		76	194.33
6 Center	9	**94**	**214.56**
		53	214.11
		76	201.56
6NW	9	**53**	**220.22**
		94	204.44
		76	191.78
RIO	9	**53**	**214.56**
		94	210.44
		76	183.33
Hospital C			
Location	Number of RNs	Tape Number	Mean Score
Unit 15	15	**53**	**209.47**
		94	198.40
		76	189.33
Unit 45	14	**53**	**218.21**
		94	203
		76	193.64
Unit 53	6	**53**	**209.47**
		94	190.67
		76	189.33

Note. Tape Number 53 = Native English Speaking Physician
Tape Number 76 = Native Japanese Speaking Physician
Tape Number 94 = Native Farsi Speaking Physician

APPENDIX N

SEQUENCES OF TAPES: TUKEY-HSD TEST RESULTS

Sequence of Tapes

1st Tape: Native English speaking physician.

Analysis of variance

Source	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	5	13193.2433	2638.6487	4.0456	.0018
Within Groups	150	97833.5964	652.2240		
Total	155	111026.8397			

Tukey-HSD Test with significance level .050

Sequence	Mean	Range
Farsi-English-Japanese	197.4872	Lowest possible score
Japanese-Farsi-English	202.4000	
English-Japanese-Farsi	207.7143	
Japanese-English-Farsi	209.0769	
English-Farsi-Japanese	217.5319	
Farsi-Japanese-English	221.5161	Highest possible score

2nd Tape: Native Japanese speaking physician

Analysis of variance

Source	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	5	7725.7096	1545.1419	2.3559	.0431
Within Groups	150	98380.4635	655.8698		
Total	155	106106.1731			

Tukey-HSD Test with significance level .050

Sequence	Mean	Range
English-Japanese-Farsi	183.7619	Lowest possible score
Japanese-English-Farsi	188.7692	
Farsi-Japanese-English	192.3226	
English-Farsi-Japanese	195.2553	
Farsi-English-Japanese	195.5897	
Japanese-Farsi-English	225.4000	Highest possible score

3rd Tape: Native Farsi speaking physician

Analysis of variance

Source	df	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	5	10533.2182	2106.6436	2.4426	.0368
Within Groups	150	129369.7241	862.4648		
Total	155	139902.9423			

Tukey-HSD Test with significance level .050

**No two groups significantly different at the .050 level.

APPENDIX O

HOW THE PHYSICIANS WERE RANKED: THE FIVE HIGHEST/LOWEST ADJECTIVES FOR EACH PHYSICIAN

How the Physicians Were Ranked: The Five Highest/Lowest Adjectives for Each Physician

A. Native English Speaking Physician

Context	Adjective	Highest Mean Scores	Lowest Mean Score
Informal	Nice	6.04	
Informal	Pleasant	6.02	
Informal	Friendly	5.97	
Informal	Literate	5.96	
Informal	Good Natured	5.95	
Informal	Unaggressive		4.65
Formal	Hesitant		4.54
Formal	Poor		4.37
Formal	Shy		4.31
Formal	Unggressive		4.10

B. Native Japanese Speaking Physician

Context	Adjective	Highest Mean Score	Lowest Mean Score
Informal	Literate	5.59	
Formal	Literate	5.58	
Informal	Educated	5.52	
Formal	Educated	5.50	
Informal	Intelligent	5.50	
Formal	Unfriendly		4.24
Formal	Shy		4.19
Formal	Cold		4.17
Formal	Unaggressive		4.17
Formal	Hesitant		3.94

C. Native Farsi Speaking Physician

Context	Adjective	Highest Mean Score	Lowest Mean Score
Formal	Clear	6.09	
Formal	Literate	6.05	
Formal	Precise	5.83	
Formal	Fluent	5.82	
Formal	Intelligent	5.71	
Formal	Unfriendly		4.35
Informal	Shy		4.24
Formal	Cold		4.23
Informal	Unaggressive		4.17
Informal	Hesitant		4.15